Alaska Climate Research Center

The Alaska State Climate Center



STATEWIDE CLIMATE SUMMARY

OCTOBER 2026

Children enjoy the early arrival of winter outside the University of Alaska Museum of the North in Fairbanks. October 22, 2026.
Photo: Martin Stuefer

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HIGHLIGHTS

Warm and frequently wet month for much of Alaska

Multiple fall storm systems with high winds and minor coastal flooding

Strong start to the snow season in Interior Alaska

Alaska's Statewide Climate Summary provides an overview of weather for the month based on data from selected weather stations throughout the state. Here, we report on temperature, precipitation and drought conditions in the state, as well as the condition of the Arctic Sea ice.

Terminology and definitions:

"Departure from normal" refers to the climatological average over the 1991-2020 normal period. Departures are given in °F for temperature parameters and in inches or as a percentage of the normal for precipitation parameters.

"Snowfall" refers to the accumulated sum of new snowfall in inches unless otherwise specified, usually given as hourly or daily values which are summed to obtain monthly values. "Snow depth" refers to the depth of the snow pack in inches as measured at a particular moment in time. "Snow water equivalent" (SWE) refers to the quantity of water that would be obtained if a particular amount of snow was melted. (Note: The density and, hence, the mass and SWE values of snow vary depending on meteorological conditions.) "Precipitation" refers to the cumulative total of rainfall plus SWE from snowfall plus the melt water equivalent of any hail or ice pellets.

Significant Weather Events and Synoptics

October started out with chilly temperatures and the first measurable snowfalls of the season in Anchorage and Fairbanks. However, warmer weather soon made a comeback. Northern Alaska in particular had a very warm though frequently wet and stormy second half of the month. Overall, October was moderately warmer than the 1991-2020 climatological normal. Bering Sea storm activity brought lots of very active weather with wind, rain and snow in all possible combinations.

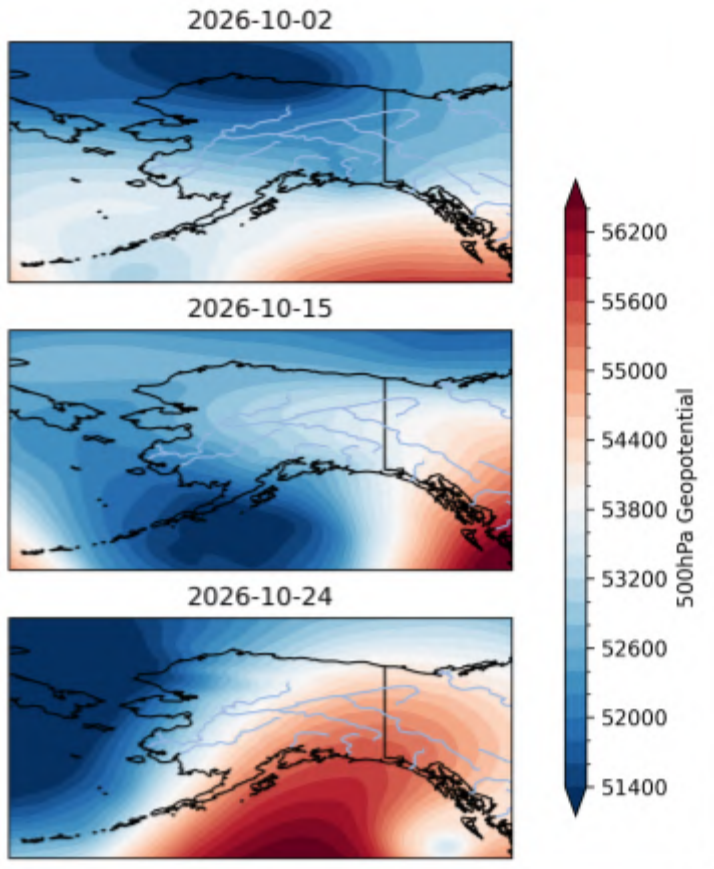


Figure 1. Geopotential height at 500hPa on September 2, 15, and 24. Data: ERA5 reanalysis.

Synoptically, the cool start to the month was caused by cold air masses pushing south as an Arctic low spread into mainland Alaska (Fig. 1, upper panel). A storm system built over the Bering Sea during the first days of the month and subsequently moved into the Gulf of Alaska with lots of precipitation and some very windy conditions along the coasts. The Interior remained relatively dry during this episode as the Alaska Range acted as a barrier to the southerly upper level flow.

Starting into the second week of October, concerns grew regarding an ex-typhoon tracking towards the Bering Sea from the western Pacific. The track of ex-typhoon Choi-Wan took a northerly turn over the Aleutians before shifting west towards Kamchatka. The Aleutian and Pribilof Islands experienced very strong, gusty winds as the remnants of Choi-Wan moved through around October 7 to 9. Coastal flood advisories and high surf warnings were issued for communities along the Bering Sea coast but no major damage was reported.

Upper level low pressure over the Bering Sea persisted through mid-month. Associated storm systems produced various fronts that pushed into Interior Alaska with freezing rain and snow showers. The next major storm system moved from the southern Bering Sea into the Gulf of

Alaska around October 15 and brought heavy rain and strong winds for southcentral and southeast Alaska (Fig. 1, middle panel). This storm had barely moved through before the next system arrived on a similar track with more rain and wind for southern Alaska. Around October 20, winter weather advisories and storm warnings were issued for parts of Southcentral and Interior Alaska as snowfall extended into lower elevations.

The last week of the month once again brought strong Bering Sea storm systems. In combination with ridging over eastern Alaska, the upper level troughing over the Bering Sea produced a strong southerly flow in the upper levels of the atmosphere, which pushed warm, wet air masses far into northern Alaska (Fig. 1, lower panel). This setup brought everything from minor flooding and high winds in coastal areas to fairly heavy snow in the Alaska and Brooks Range, rain and sleet at lower elevations, and unusually mild temperatures in Arctic Alaska. All in all, October was about as eventful a weather month as can be expected in Alaska this time of year!

Temperature

Monthly mean temperatures in October were warmer than or close to the 1991-2020 normal at our selected First Order stations (Fig. 2, Table 1). The warmest stations in relative terms were Nome, Kotzebue, and Fairbanks with 4.9°F, 4.3°F, and 4.1°F above normal, respectively. The southwestern islands and the Gulf of Alaska coastal stations were closer to the climatological average. Deviations from normal were marginal in Southeast Alaska, Kodiak and Homer with less than 1°F above the climatology. Ketchikan was the only selected station with a minimally negative deviation from normal this month with -0.6°F.

The dominance of upper level southerly flow in late October (Fig. 1, lower panel) is apparent in the daily temperature anomalies (Fig. 3). Stations in northern Alaska recorded their largest positive anomalies during this period as warm, wet air moved in. Bettles had multiple days with deviations of more than 20°F above normal during the last week of the month. The warm spell was similarly pronounced in the northwest (Nome, Kotzebue) and at other interior stations. The moderate cold snap early in the month was also most pronounced in the Interior and northern Alaska. Temperatures in southwest and southcentral Alaska broadly followed the same pattern of a cool start and warm end to the month but were closer to normal overall. Southeast Alaska was the only region to end October with slightly cooler than average temperatures.

Multiple daily temperature records were set during the warm spell in late October. For example, Bettles set new records for daily mean temperatures on October 26, 27, and 30th. Refer to the tables in the Appendix for a full list of daily temperature records in October.

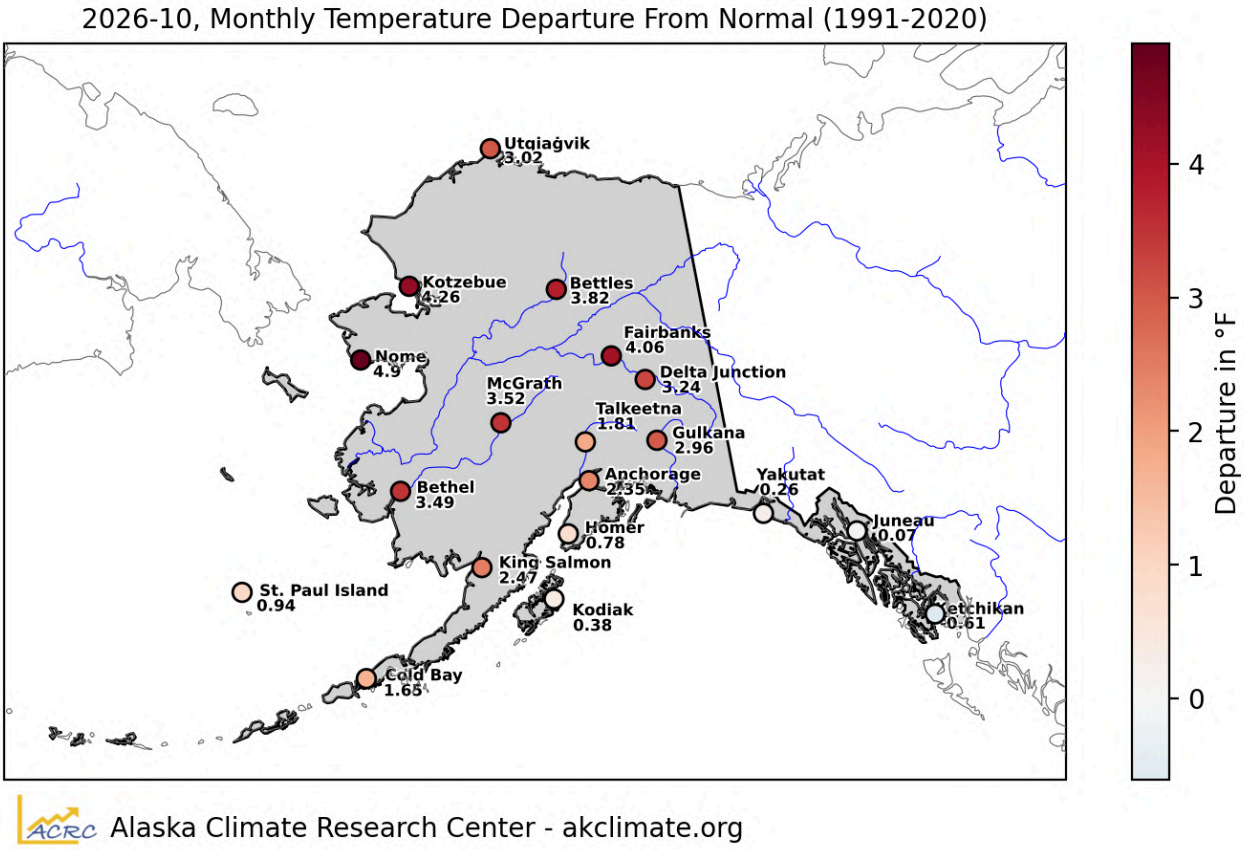


Figure 2. Monthly mean temperature departure from normal (ºF), October 2026, at the selected First Order stations in Alaska.



Figure 3. Daily mean temperature departures from normal for each day in October 2026 at the selected stations.

Station	Observed (ºF)	Normal (ºF)	Departure (ºF)
Anchorage	38.69	36.35	2.35
Bethel	35.65	32.16	3.49
Bettles	25.18	21.35	3.82
Cold Bay	42.95	41.3	1.65
Delta Junction	29.69	26.45	3.24
Fairbanks	30.32	26.26	4.06
Gulkana	30.06	27.1	2.96
Homer	40.98	40.2	0.78
Juneau	42.27	42.2	0.07
Ketchikan	45.6	46.2	-0.61
King Salmon	38.87	36.4	2.47
Kodiak	42.53	42.15	0.38
Kotzebue	31.16	26.9	4.26
McGrath	31.97	28.45	3.52
Nome	35.34	30.44	4.9
St. Paul Island	40.39	39.45	0.94
Talkeetna	35.97	34.16	1.81
Utqiaġvik	24.23	21.21	3.02
Yakutat	42.11	41.85	0.26

Table 1. Mean monthly air temperature, normal (1991-2020) and departure for selected stations throughout the state, October 2026. Color-coded to match Figure 2.

Precipitation and snow

October precipitation was above average in much of the state. The stations on the Chukchi and northern Bering Sea coast and in Interior Alaska had a particularly wet month with more

than 200% of normal precipitation. McGrath and Kotzebue top the list this month with 246% and 240% of normal (Table 2; Figs. 5 and 6). October 2026 in McGrath, Kotzebue, and Nome ranked in the top 5 of wettest Octobers on record for the respective time series. Utqiaġvik had a near normal month with 107% of the 1991-2020 climatology. Precipitation at the stations along the Gulf of Alaska coastline ranged from 70% (Kodiak) to 149% (Homer).

The abnormally dry conditions in southeast Alaska that we saw in recent months have eased. A limited region along the Alaska Highway near the Canadian border remains under abnormally dry conditions as per the Alaska Drought Monitor. This equates to about 1% of the state being considered abnormally dry (AK Drought Monitor, Oct. 27).

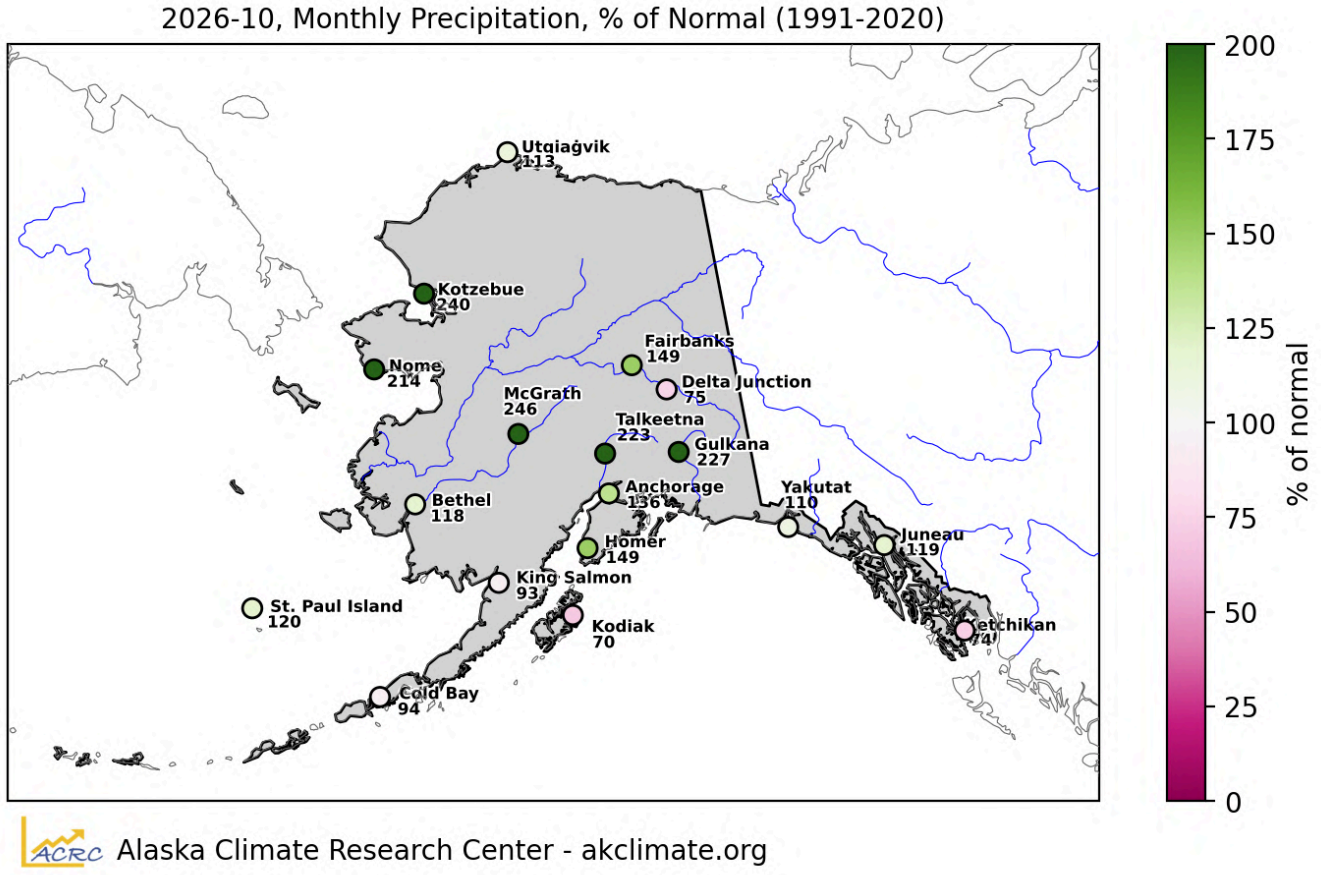


Figure 5. Monthly precipitation in percentage of normal (1991-2020 reference period), October 2026, at the selected First Order stations. *Note: We are excluding precipitation data from Bettles this month due to data inconsistencies.*

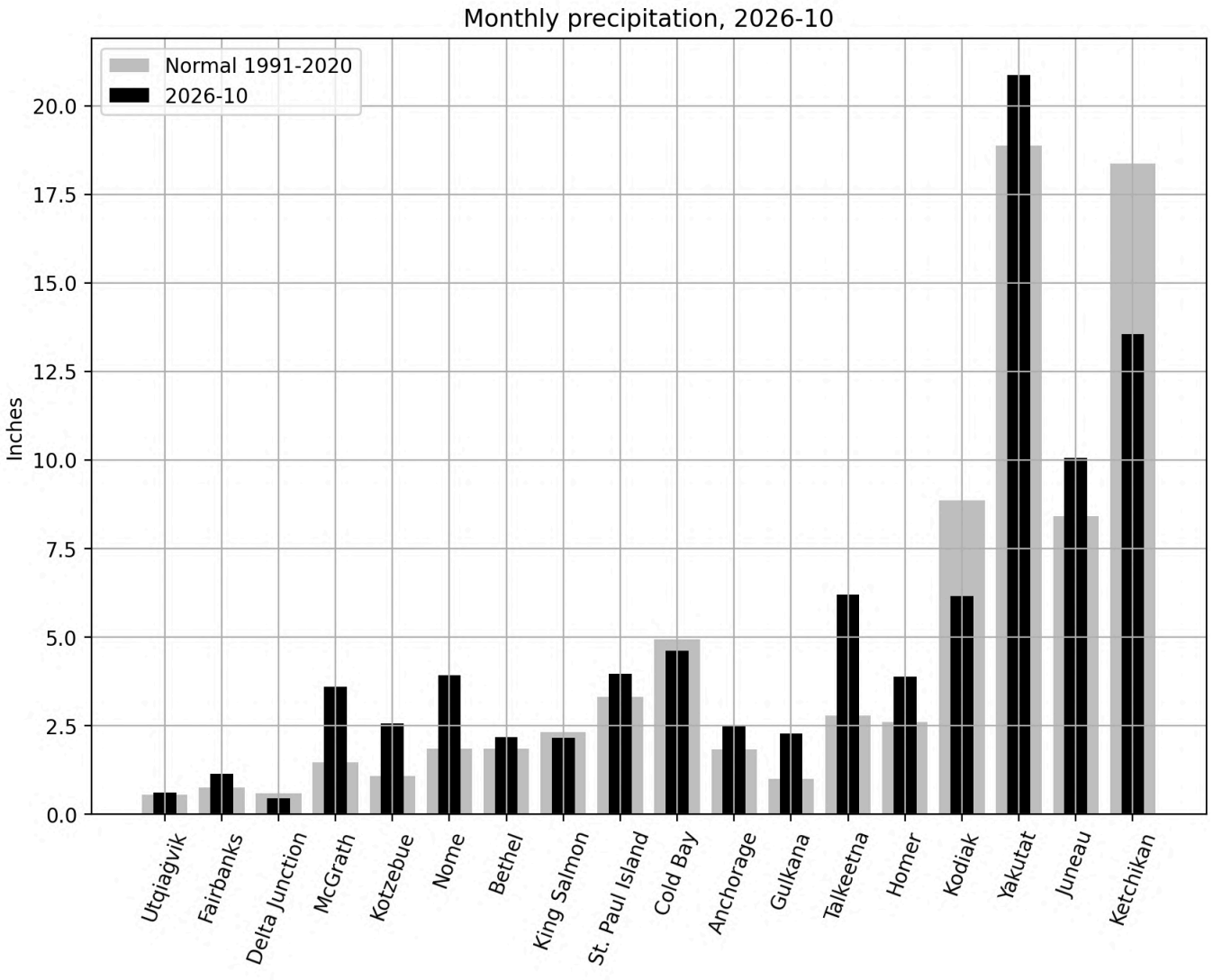


Figure 6: Monthly precipitation (inches) compared to the 1991-2020 normals at the selected First Order stations. *Note: We are excluding precipitation data from Bettles this month due to data inconsistencies.*

Station	Precipitation (in)	Normal (in)	% of Normal
Anchorage	2.5	1.8	135.7
Bethel	2.2	1.8	117.9
Cold Bay	4.6	4.9	93.5
Delta Junction	0.4	0.6	74.6
Fairbanks	1.1	0.8	148.7

Gulkana	2.3	1.0	227.0
Homer	3.9	2.6	148.7
Juneau	10.0	8.4	119.4
Ketchikan	13.6	18.4	73.8
King Salmon	2.2	2.3	93.1
Kodiak	6.2	8.8	69.6
Kotzebue	2.6	1.1	240.2
McGrath	3.6	1.5	245.9
Nome	3.9	1.8	213.6
St. Paul Island	4.0	3.3	119.6
Talkeetna	6.2	2.8	222.7
Utqiaġvik	0.6	0.5	113.0
Yakutat	20.9	18.9	110.5

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, October 2026. Colors match the color scale in Figure 4. *Note: We are excluding precipitation data from Bettles this month due to data inconsistencies.*

Snow

The 2026/27 snow season is underway and we resume our regular snowfall and snow depth updates for the four selected stations with long term snow records, Juneau, Anchorage, Fairbanks, and Bettles. The long term data allows contextualizing current conditions against the 1991-2020 climatological normal, much like we do for temperature and precipitation. Additional information is available from other stations with shorter records and snow-specific measurements from the SNOTEL station network.

Snow was recorded at three of the four long term stations this month - only Juneau is still waiting for the first measurable snow accumulation of the season. Anchorage received less snow than in an average October with only 0.9 inches (16% of normal); much of this month's precipitation fell as rain. The snow season in Interior Alaska is off to an above average start. Snowfall totals in Fairbanks amounted to 12.3 inches (150% of normal). Bettles also reported substantial snowfall, but inconsistencies between reported snowfall and precipitation measurements raise concerns about data reliability and prevent a meaningful assessment of monthly snowfall totals.

Snow depth In Fairbanks is well above normal for the time of year with around 7 inches (Fig. 7). The SNOTEL basin overview confirms substantially above average snow water equivalent values for the time of year in Arctic Alaska and the Interior. The Mat-Su basin and southeast Alaska are reporting below normal SWE.

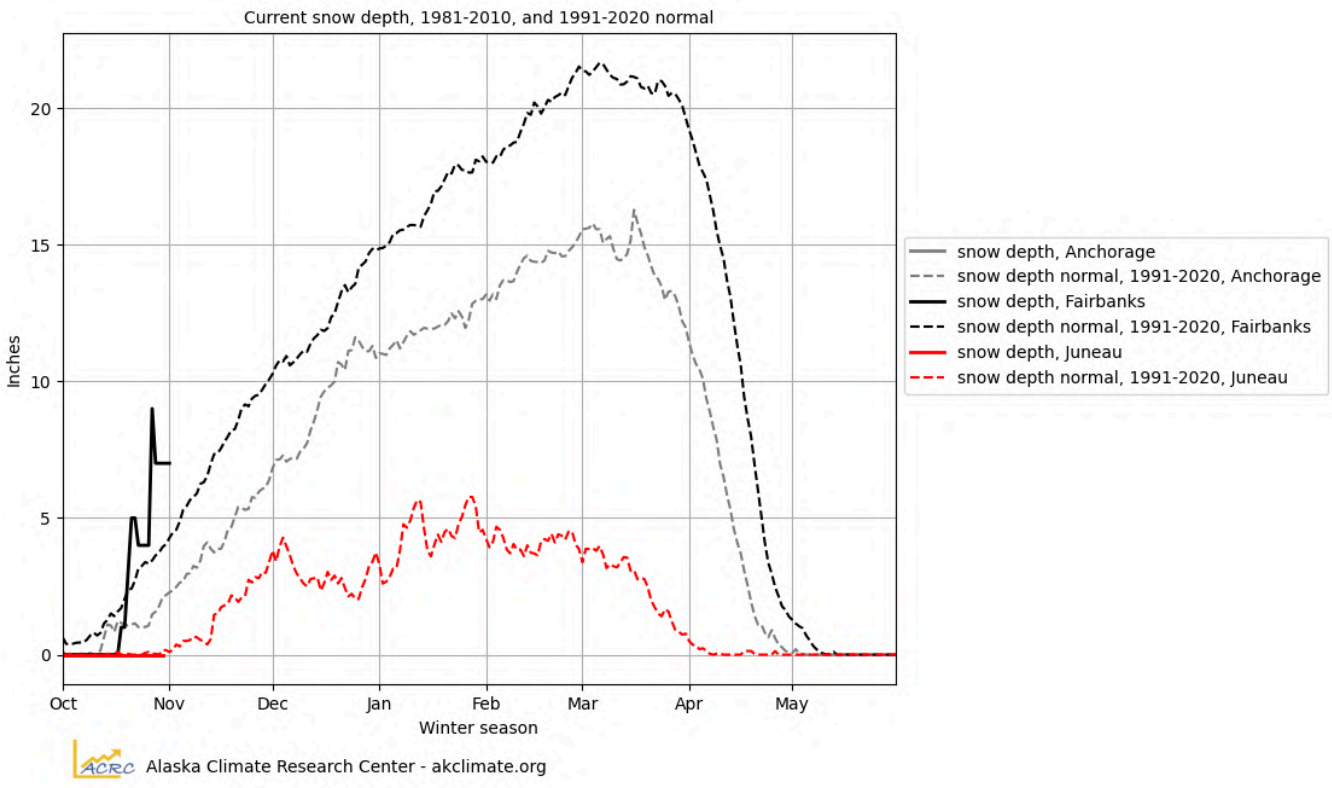


Figure 7: Snow depth at the four selected stations with long term records for the current hydrological year (2026/27). The climatological normal is shown as a dashed line, current data are shown as solid lines. *Note: We are excluding precipitation data from Bettles this month due to data inconsistencies.*

Teleconnections and seasonal outlooks

El Niño continued to strengthen during October and is expected to intensify further through the end of the year. NOAA's Climate Prediction Center forecasts strong to very strong El Niño conditions through January–March 2027. El Niño winters generally favor warmer-than-average conditions in Alaska, particularly in southern and southeastern parts of the state. However, no two El Niño events are alike, and their impacts on Alaska's weather can vary considerably from one event to another. At the same time, the Pacific Decadal Oscillation (PDO) remains negative. A negative PDO is generally associated with cooler conditions in Alaska and may counteract some of the typical warming influence of El Niño. The combination of a strong to very strong El Niño and a negative PDO is unusual, as the major El Niño events of 1982–83,

1997–98, and 2015–16 all coincided with a positive PDO. Despite these competing large-scale influences, NOAA's latest seasonal outlook favors above-normal temperatures across eastern Alaska for the early winter months. However, considerable uncertainty remains regarding how these climate patterns will interact, and seasonal outlooks should be interpreted with caution.

Arctic Sea Ice

From October first to October 31, total Arctic Sea ice extent increased by over two million square kilometers, to **7.723 million km²** (Table 3, 5-day extent). Freeze up after the summer minimum has proceeded relatively quickly (Fig. 8). See the NSIDC summer recap for more information on the 2026 sea ice melt season.

The majority of the deficit in total Arctic Sea ice extent compared to climatology is due to very low extents in the Kara and Barents Sea (Fig. 9). Ice extent is below normal along Alaska's northern coast but near normal and even slightly above in the northeastern Chukchi Sea. This year's sea ice evolution remains similar to 2025 despite some regional differences (Fig. 8, data source: nsidc.org). However, the strengthening El Niño conditions may affect sea ice growth as we head into winter. In past El Niño years, there has been a tendency for delayed freeze-up in the Bering Sea and Cook Inlet. More detailed regional information on current conditions and the expected timing of freeze up is available in the NOAA sea ice outlook.

Time Period	Extent (M km^2) October 1st	Extent (M km^2) October 31st	Average change rate (% per day)
2026	5.413	7.723	1.38
2025	5.067	7.565	1.59
2012 (Record Min)	3.923	7.661	3.07
1981-2010 median	6.803	9.504	1.28

Table 3. Arctic Sea ice extent (northern hemisphere 5-day averages) and October change for 2026, 2025, the record minimum year of 2012, and the 1981-2010 median. Data: nsidc.org, 5-day sea ice extent.

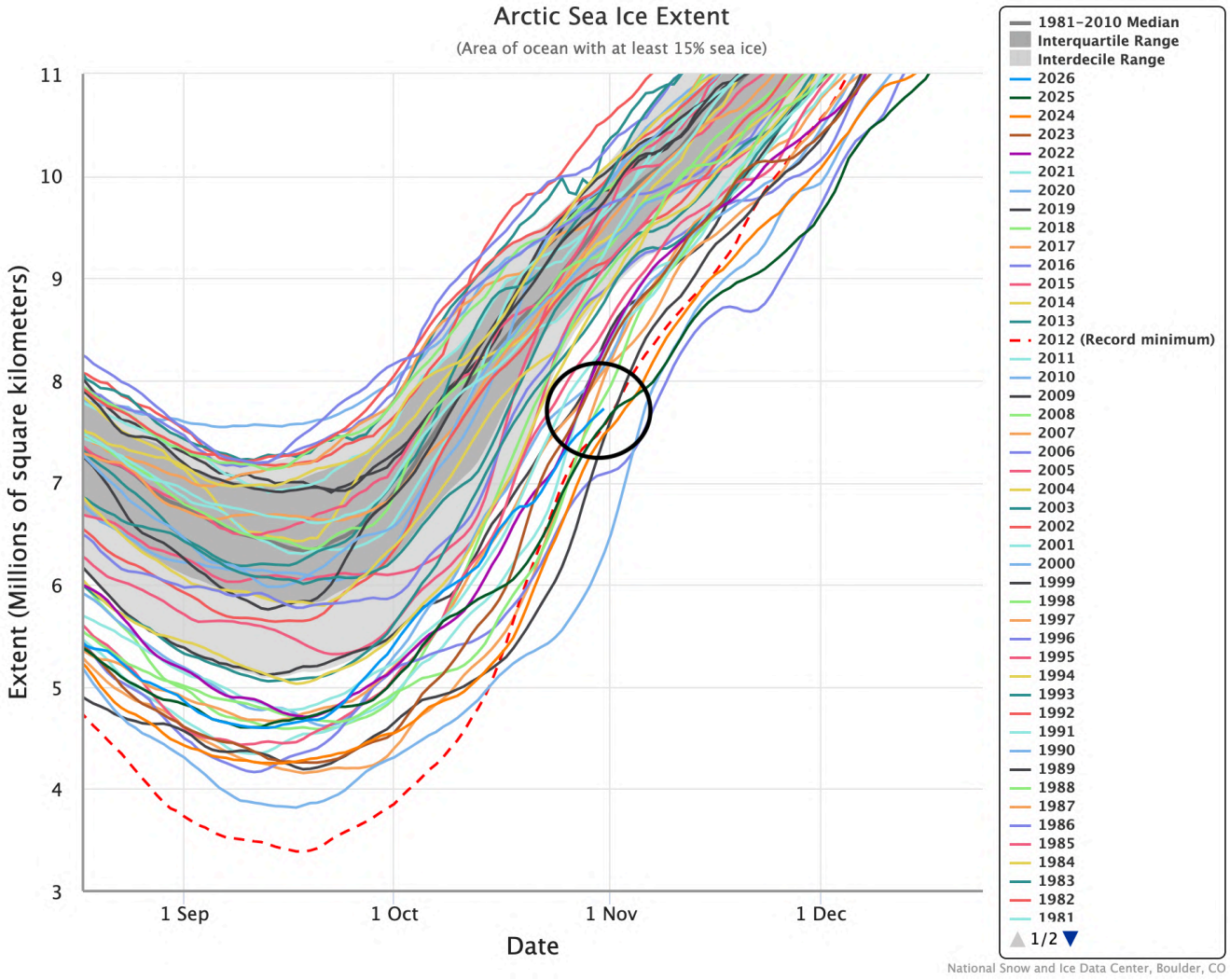


Figure 8. Time series of daily Arctic sea ice extent. This year's data are updated through October 31, 2026. All years of the available time series are shown as colored lines with a black circle identifying the October 31, 2026, Arctic Sea ice extent (blue line). Data and image source: NSIDC

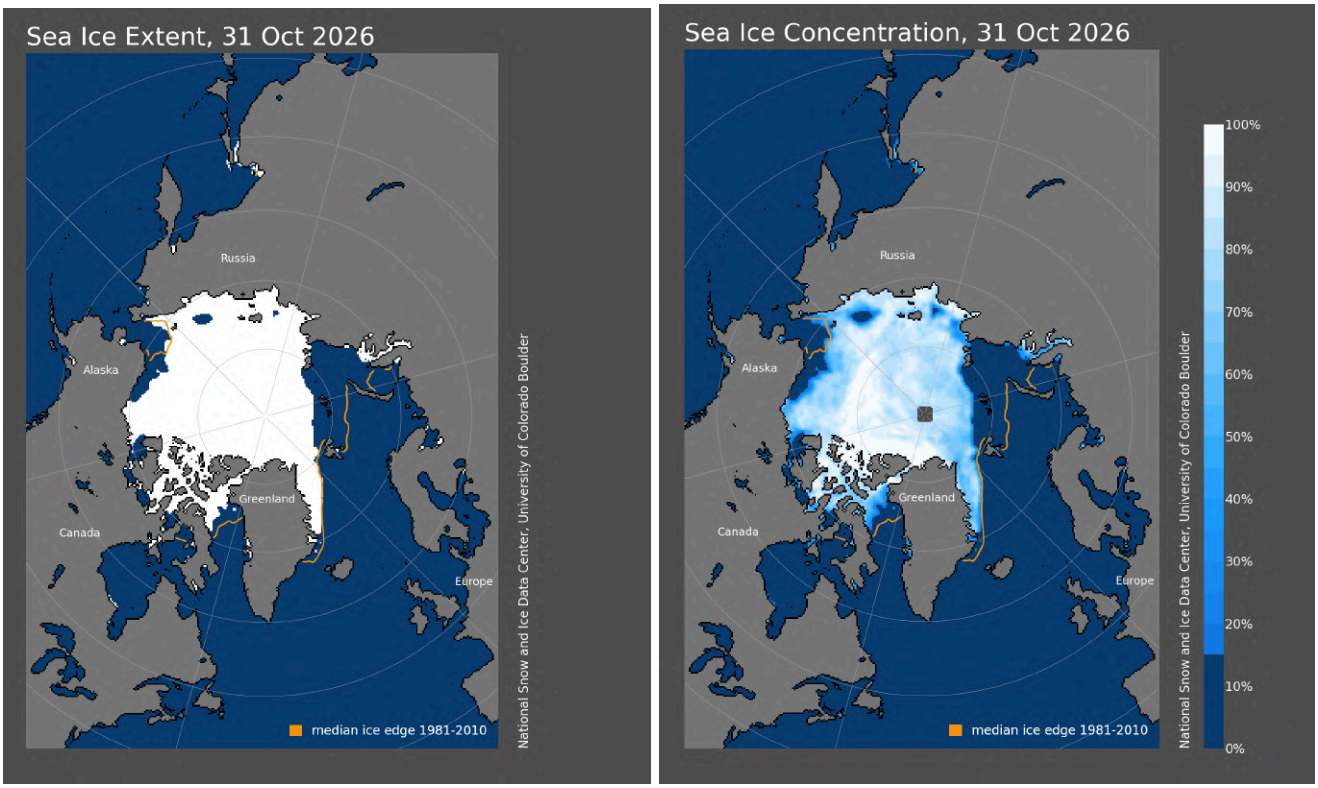


Figure 9A. (left) Arctic Sea ice extent, October 31st 2026 compared to 1981-2010 average
Figure 9B. (right) Arctic Sea ice concentrations, October 31st 2026 compared to 1981-2010 average (Data and images: NSIDC)

Newsworthy Information

Power outages after high winds hit Mat-Su

Strong winds across the Mat-Su valley caused temporary power outages following damage to powerlines from downed trees in late October. The number of affected residents was reported to be in the tens of thousands. The NWS had issued high wind warnings ahead of the event (Alaska Public Media).

October Volcanic Activity

Like in previous months, the Alaska Volcano Observatory continues to monitor activity at Great Sitkin and Shishaldin volcanos. Great Sitkin is under “watch” status (aviation color code orange), whereas Shishalidin is at “advisory” (yellow) status (USGS Volcano Notifications). No major changes have been reported since last month.

October Seismic Activity

Multiple magnitude 3 to 4 earthquakes were registered along the tectonically active Aleutian Arc in October. On October 20th, a magnitude 5.4 earthquake occurred south of Sand Point. A magnitude 5.6 earthquake was recorded in the Interior near Lake Minchumina on October 15. The quake was felt around Fairbanks but no damage was reported. Browse the interactive map provided by the Alaska Earthquake Center for more information.

Appendix

Highest Average Daily Temperature Record				
Station	**Date**	**New Record (ºF)**	**Year of Old Record**	**Old Record (ºF)**
Bethel	2026-10-24	43.0	1969	41.0
Bettles	2026-10-26	33.5	2002	31.0
Bettles	2026-10-27	34.0	2013	31.0
Bettles	2026-10-30	31.5	2016	30.5
Cold Bay	2026-10-18	52.0	2002	51.0
McGrath	2026-10-26	41.5	1946	38.5
Nome	2026-10-24	41.0	1911	40.5

Table A1: October 2026 daily records of average daily temperature, i.e. highest/lowest values of average daily temperature ever recorded on specific days. Records are computed since the beginning of the respective time series.

Highest Maximum Daily Temperature Record				
Station	**Date**	**New Record (ºF)**	**Year of Old Record**	**Old Record (ºF)**
Bettles	2026-10-27	36.0	2013	35.0
Cold Bay	2026-10-18	60.0	2004	58.0
Cold Bay	2026-10-24	54.0	2022	53.0
Cold Bay	2026-10-29	56.0	1971	53.0
Kodiak	2026-10-26	56.0	1936	54.0

Table A2: October 2026 daily records of maximum daily temperature, i.e. highest/lowest values of maximum daily temperature ever recorded on specific days. Records are computed since the beginning of the respective time series.

Highest Minimum Daily Temperature Record				
Station	**Date**	**New Record (ºF)**	**Year of Old Record**	**Old Record (ºF)**
Bethel	2026-10-24	39.0	1969	35.0
Bethel	2026-10-26	41.0	2019	40.0
Bettles	2026-10-26	32.0	1972	28.0
Bettles	2026-10-27	32.0	2013	27.0
Bettles	2026-10-30	30.0	2016	27.0
Kotzebue	2026-10-25	34.0	1972	33.0
Kotzebue	2026-10-28	35.0	2013	34.0
McGrath	2026-10-26	39.0	1943	34.0
Nome	2026-10-24	40.0	1911	39.0

Table A3: October 2026 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.

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 https://akclimate.org/. Please report any comments, ideas or errors to uaf-climate@alaska.edu