



Spring Breakup Outlook for Alaska

Valid April 05, 2024

[Alaska-Pacific River Forecast Center](https://www.weather.gov/aprfc)

Next Product Issuance: April 12, 2024

www.weather.gov/aprfc

EXPERIMENTAL PRODUCT

Spring Breakup Outlook for Alaska

Updates to the previous Spring Breakup Outlook

- *April 1 ice thickness data across the state are near normal. Recent snowpack measurements show normal to above normal accumulated snow at most locations across interior Alaska. Climate outlooks are indicating temperatures to remain colder than normal across most of interior Alaska through mid April.*

Statewide Flood Potential Overview

The outlook for Alaska spring ice breakup and snowmelt flood potential is currently rated as normal for the majority of the state.

The spring breakup flood potential for major rivers in Alaska:

- ..Yukon River: **Normal**
- ..Koyukuk River: **Normal**
- ..Kuskokwim River: **Above Normal**
- ..Tanana and Chena Rivers: **Normal**
- ..Copper Basin Rivers: **Above Normal**
- ..Susitna River: **Normal**
- ..North Slope Rivers: **Normal**

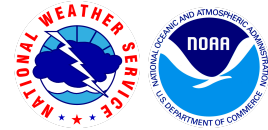
This outlook is based on observed snowpack, ice thickness reports, and seasonal temperature outlooks. The term 'normal' is defined as being at or near the climatological value, which is typically defined over a 30-year period of record.

River Ice Observations

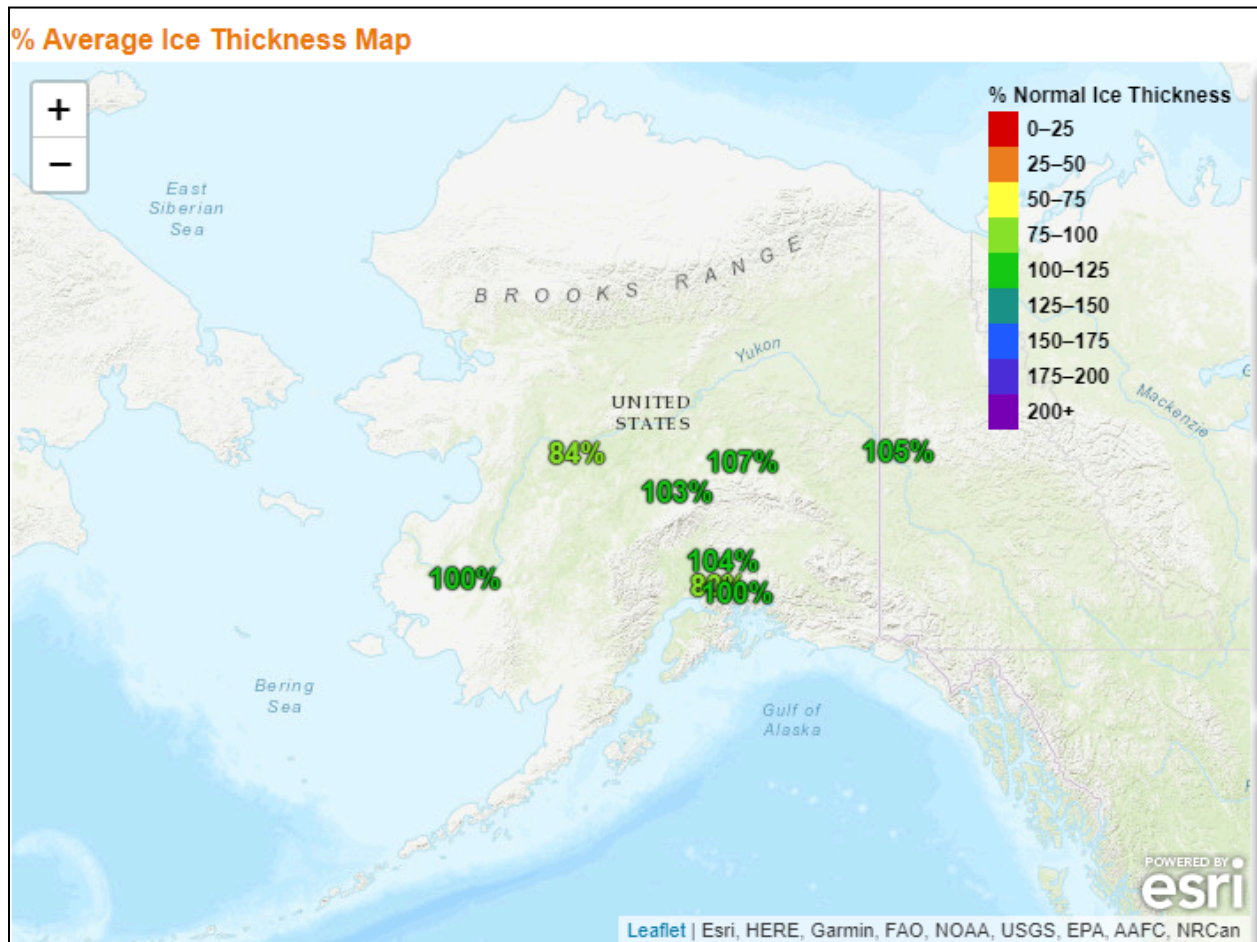
April 1st river ice observations are available for a limited number of observing sites in Alaska. Late March and early April measurements indicate that ice thickness is near normal across the state. Observations across interior Alaska range from 85%-110% of normal, with observations along the mid-Yukon River approximately 85% normal. However, dense jumble ice has been observed on the Yukon River between Rampart and Tanana. Recent UAF Fresh Eyes On Ice team (FEOI) reconnaissance confirmed that ice this year (2024) along the middle Yukon and Tanana River was on average thicker than last year (2023). Yukon River ice thickness at Eagle appears to be thicker than the past two winters (2022-2023). Observers on the Kuskokwim

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River reported normal to slightly below normal ice thicknesses between Aniak and Bethel, with recent reports indicating that river ice has begun to deteriorate, and/or soften in some locations. No freeze-up jams or mid-winter breakups were reported across the Yukon and Kuskokwim River basins.



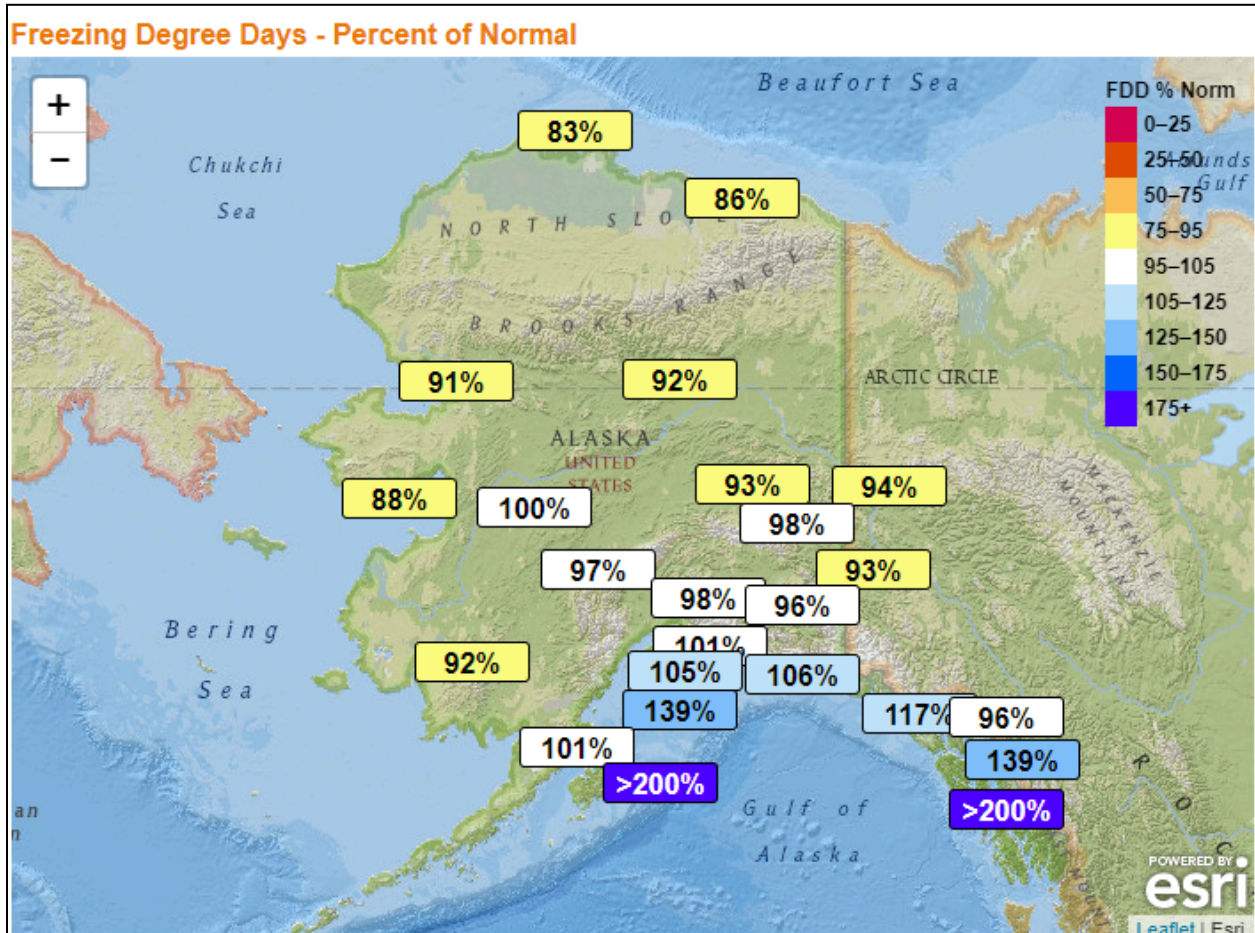
[Link to % Average ice thickness map](#)

Freezing Degree Days

Cumulative freezing degree days (FDD), which can serve as a proxy for river ice thickness, are near normal across most of Alaska. Colder conditions were observed across coastal sites along the Gulf of Alaska (Homer to Sitka), where FDD was reported to be 120% to 200% of normal. Near normal FDD conditions have been observed across Southcentral and Copper River Valley. The West Coast, Interior, and North Slope observed near normal FDD, ranging from 85% to 100% of normal.

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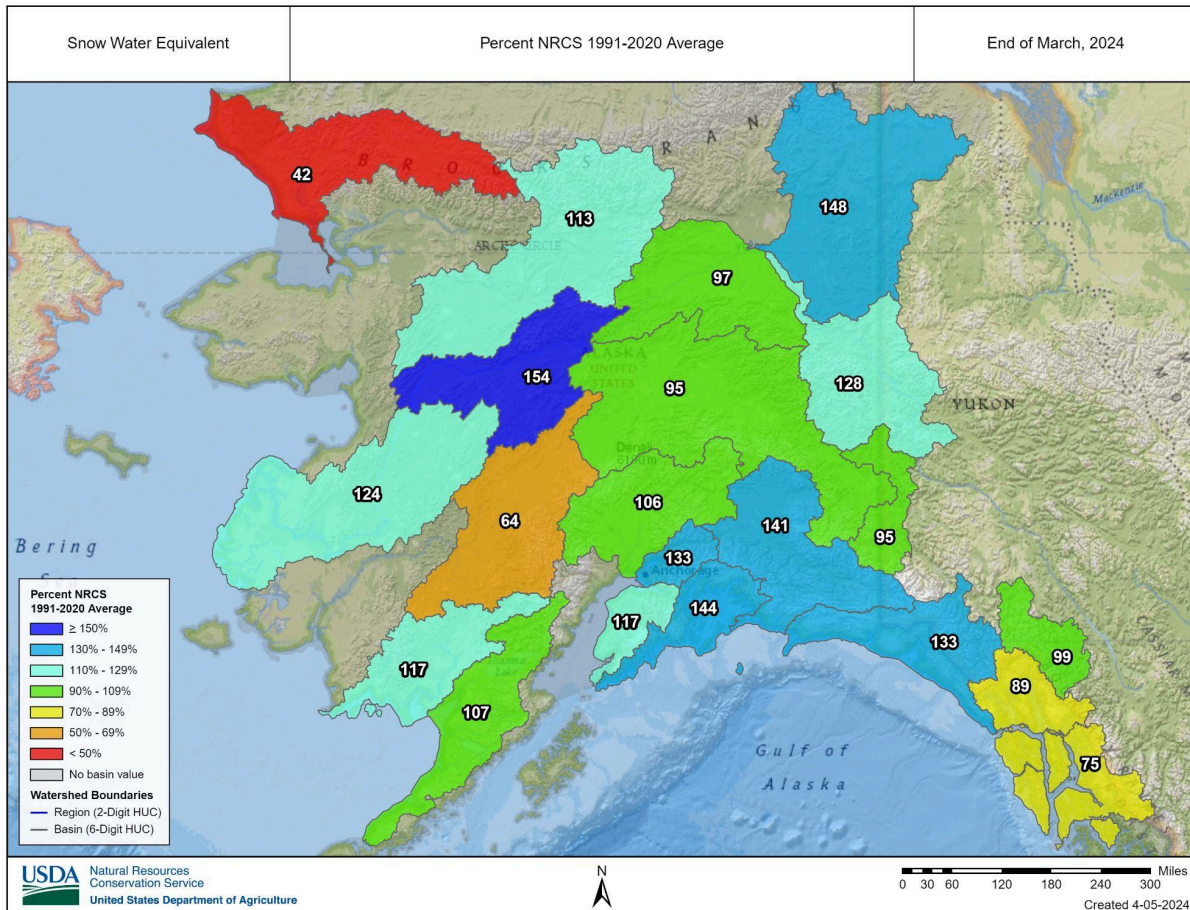
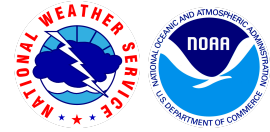
[Link to freezing degree day \(FDD\) map](#)

Snowpack

The April 1 analysis by the [Natural Resources Conservation Service \(NRCS\)](#) is not complete yet. The March 1 analysis indicates above normal snow for the majority of the state and preliminary April 1 data indicates the Alaska snowpack percent of normal likely has not changed significantly. The current NRCS snowpack map can be accessed [here](#).

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The Yukon Basin end of March snowpack NRCS analysis with additional March 1 information from Yukon Canada is reporting near normal to above normal snowpack. The Porcupine and the Fortymile Basins are reporting well above normal, approaching 150% of normal. The upper Kuskokwim Basin is below normal snowpack however the number of reported measurements is very small. Recent observations from observers in the communities indicate above normal snowpack and other climate analyses also indicate likely above normal snowpack for the majority of the Kuskokwim basin. In Southcentral Alaska, the snowpack in the Copper Basin is notably above normal, ~140% of the end of March average. All monitoring sites in the basin are reporting above-normal snowpack levels. Notably, the March 1 analysis showed eight sites in the basin rank within the top five of historical records for snowpack levels, with three sites reporting record highs. However, despite this above-average snowpack, it's worth noting that the basin's average snowpack remains lower than the levels observed in 2022 (175-200%) and 2023 (160-180%). Glennallen experienced flooding both of those years. The Susitna Basin is

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reporting above normal snowpack. Stations in the Kenai Basin are reporting generally above normal.

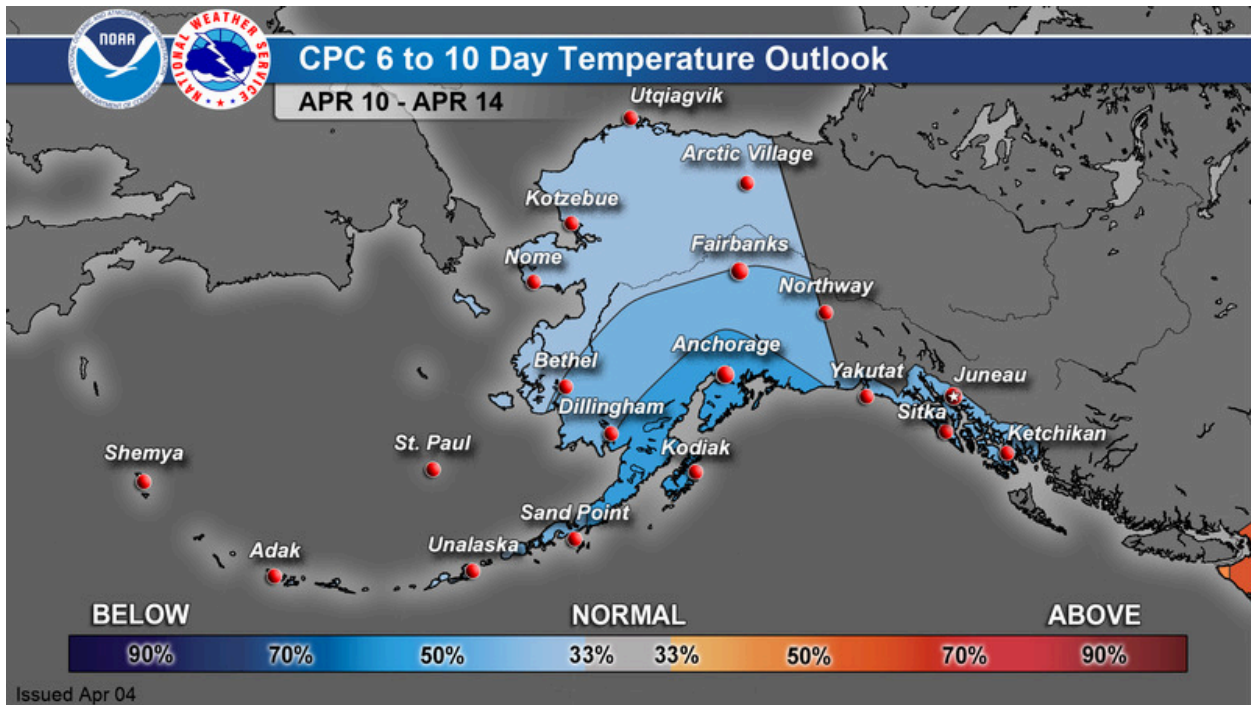
The next NRCS statewide snowpack summary is expected after the first week of April.

Climate Outlook

The most important factor determining the severity of ice breakup remains the weather during April and May. Dynamic breakups, with a high potential for ice jam flooding, typically require cooler than normal temperatures in early April followed by an abrupt transition to warm, summer-like temperatures in late April to early May.

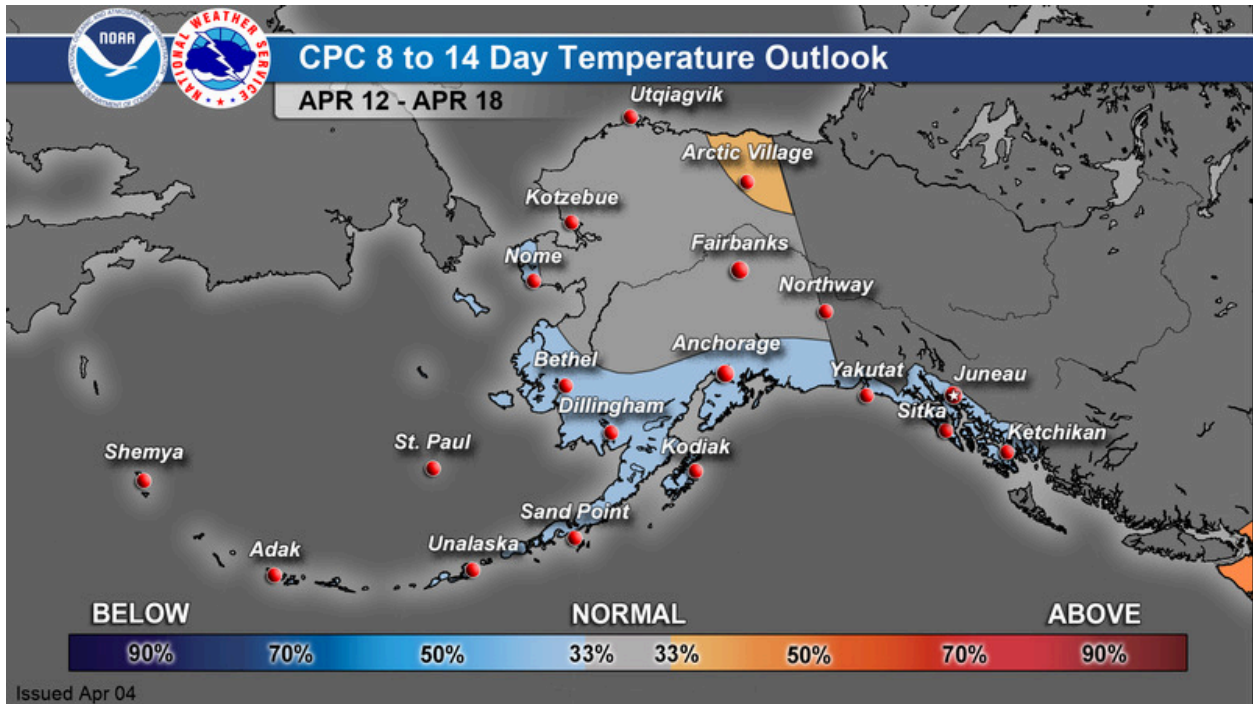
NOAA's Climate Prediction Center April 4 outlooks favor normal to colder than normal temperatures through the third week in April while continuing to indicate increased likelihood of above normal temperatures for the central and eastern interior. This outlook would indicate an increased likelihood of a fairly rapid warm up over interior Alaska during the last half of April.

Looking ahead for the next three months, including April, May, and June, there's an elevated probability (40-60% chance) of above-normal temperatures across all of Alaska.



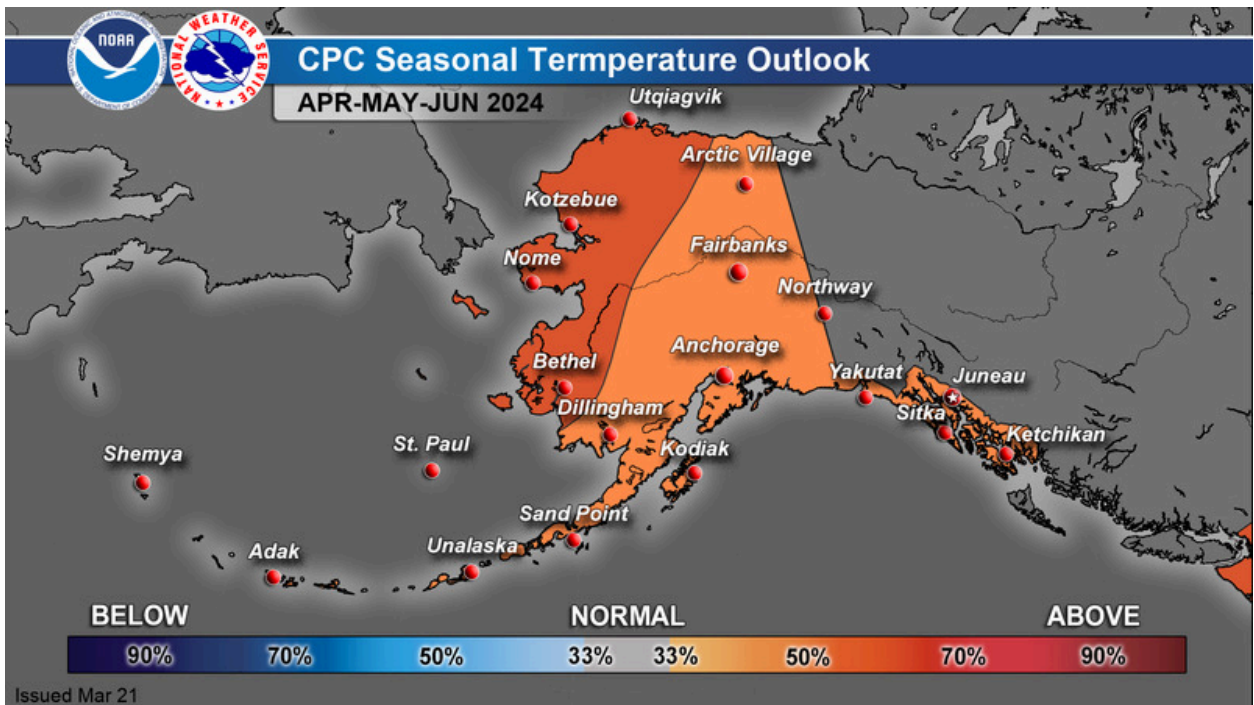
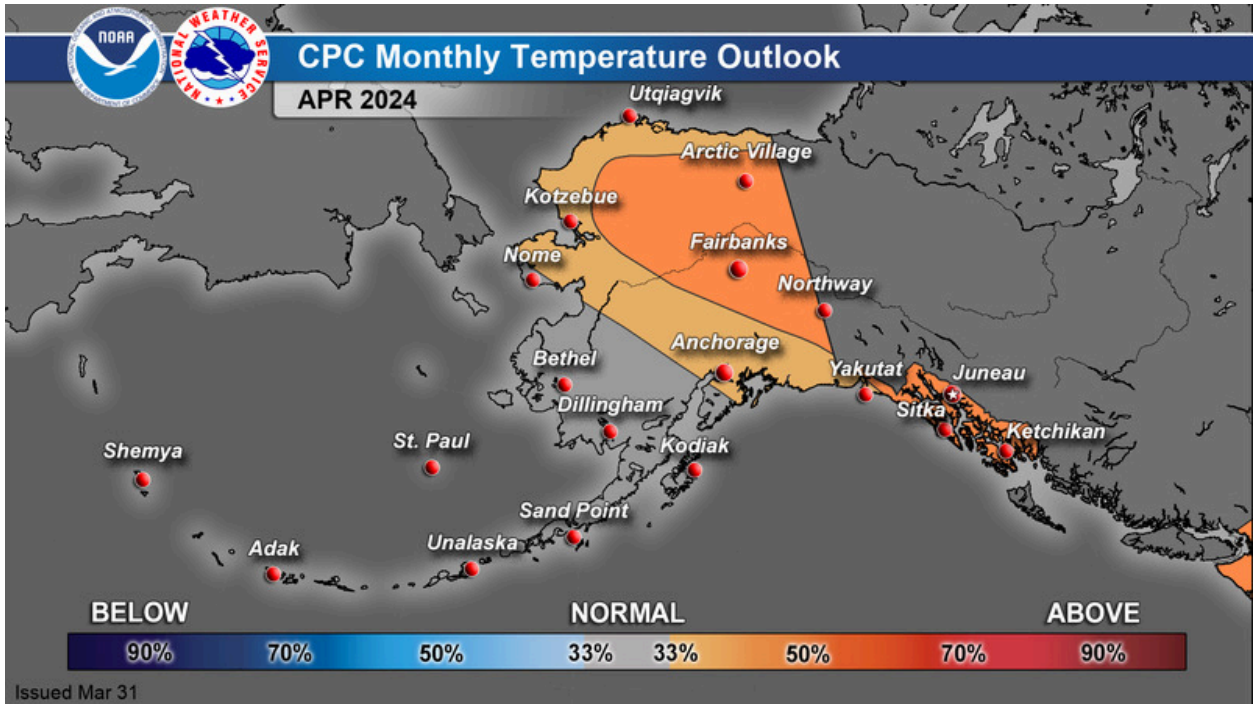
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The next Spring Breakup Outlook will be published April 12, 2024.

This product is experimental. For more information and to submit comments, please contact:

Celine van Breukelen, Service Coordination Hydrologist

Alaska-Pacific River Forecast Center

Anchorage, AK

907-266-5160

Email: celine.vanbreukelen@noaa.gov