



## Spring Breakup Outlook for Alaska

Valid April 25, 2025

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

Next Product Issuance: May 2, 2025

[www.weather.gov/aprfc](https://www.weather.gov/aprfc)

### EXPERIMENTAL PRODUCT

#### Spring Breakup Outlook for Alaska

##### Updates from the previous Spring Breakup Outlook

The ice went out on the South Fork of the Kuskokwim River at Nikolai April 22nd. An ice jam and high water was reported on the Tanana River near Salcha April 23rd before releasing April 24th. The Chena River is mushing out with some small ice runs being reported over the last few days.

Across interior Alaska, mild temperatures and sunny conditions—along with a nearly depleted low-elevation snowpack—have led to continued ice degradation on the Upper Yukon, Tanana, and parts of the Upper and Middle Kuskokwim Rivers. In contrast, deeper snowpack and cooler temperatures across the Porcupine, Middle Yukon, and Koyukuk basins have limited both snowmelt and ice degradation so far this spring. Cooler April temperatures over the Yukon-Kuskokwim Delta have also slowed ice decay in the lower Yukon and Kuskokwim Rivers, though snowpack in these areas remains thin or even nearly depleted in spots.

There are no significant changes to the breakup flood outlook. The **Middle Yukon, Koyukuk, Kobuk, Buckland and eastern North Slope Rivers** remain the primary areas of concern for ice jam flooding this season. Additionally, rivers draining the White Mountains north of Fairbanks—including the **Chena River upstream of the Moose Creek Dam**—face an elevated risk of snowmelt flooding later in May due to a well above average snowpack in their headwaters.

Detailed sections below have been updated with new information for the community flood potential graphics and tables as well as forecast temperatures, current snowpack information and ice thickness.

##### Statewide Flood Potential Overview

The potential for spring ice breakup and snowmelt-induced flooding varies significantly across Alaska. ***In the Interior, including the middle Yukon, lower Tanana, Chena, Kobuk, and Koyukuk River basins, as well as portions of the North Slope, breakup potential is above average due to higher-than-normal snowpack levels combined with the potential for cooler temperatures persisting into early May. In contrast, portions of the Lower Yukon and Kuskokwim River basins, along with most of Southcentral Alaska, can expect a***

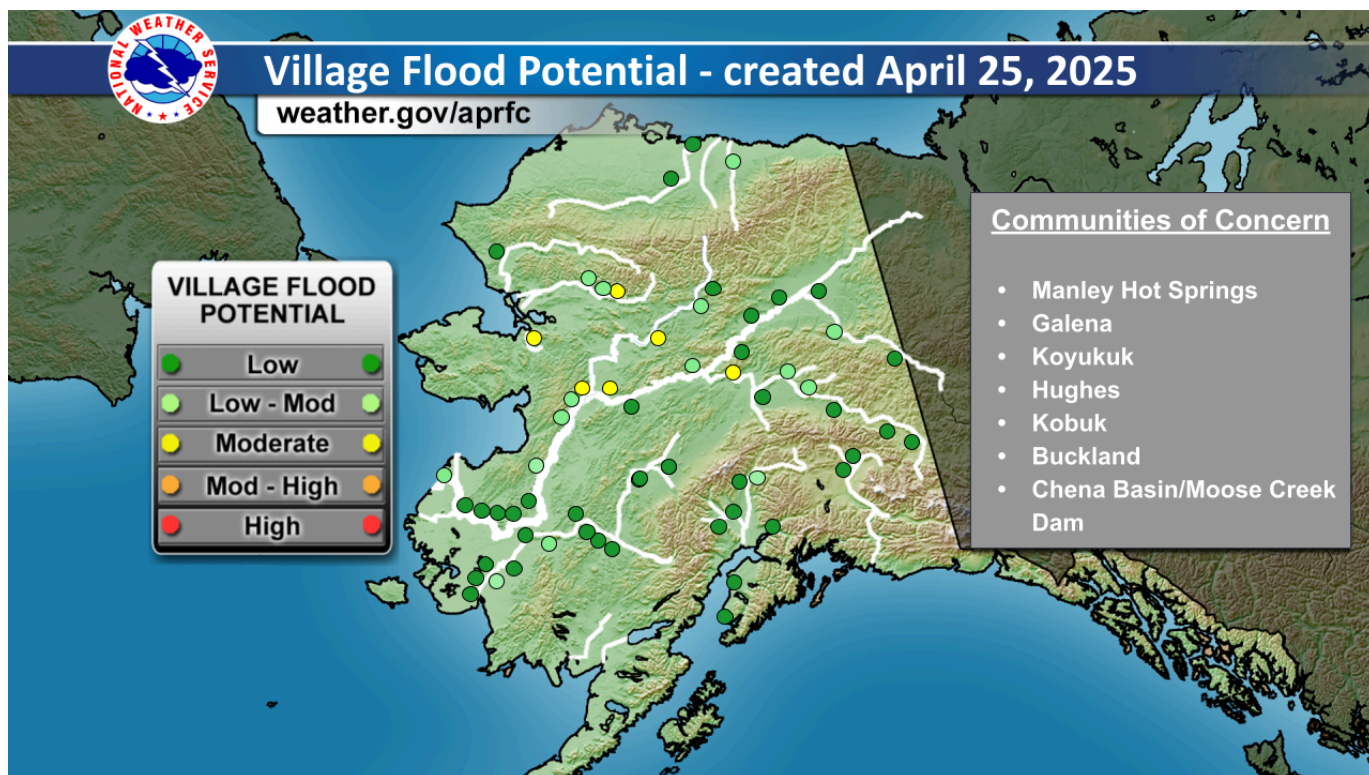


## Spring Breakup Outlook for Alaska

Valid April 25, 2025

***below-average breakup potential due to very low snowpack caused by warmer than normal winter temperatures.***

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.



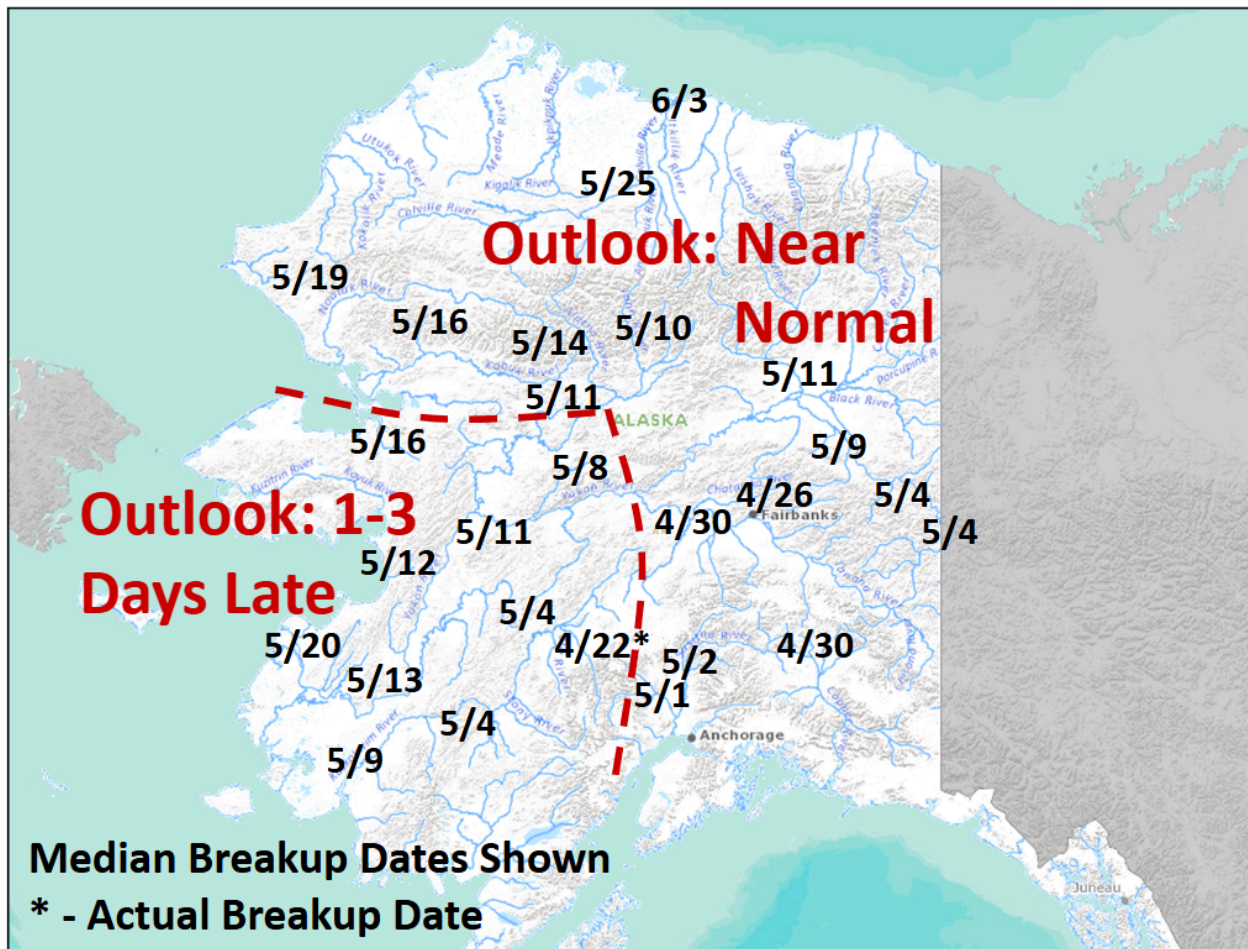


## Spring Breakup Outlook for Alaska

Valid April 25, 2025

### Timing of River Ice Breakup

Breakup is expected to begin within the next week on the mainstem of the Yukon and Kuskokwim Rivers. Timing of breakup is expected to be near normal for rivers across northern and eastern Alaska, and 1-3 days later than normal in western Alaska..







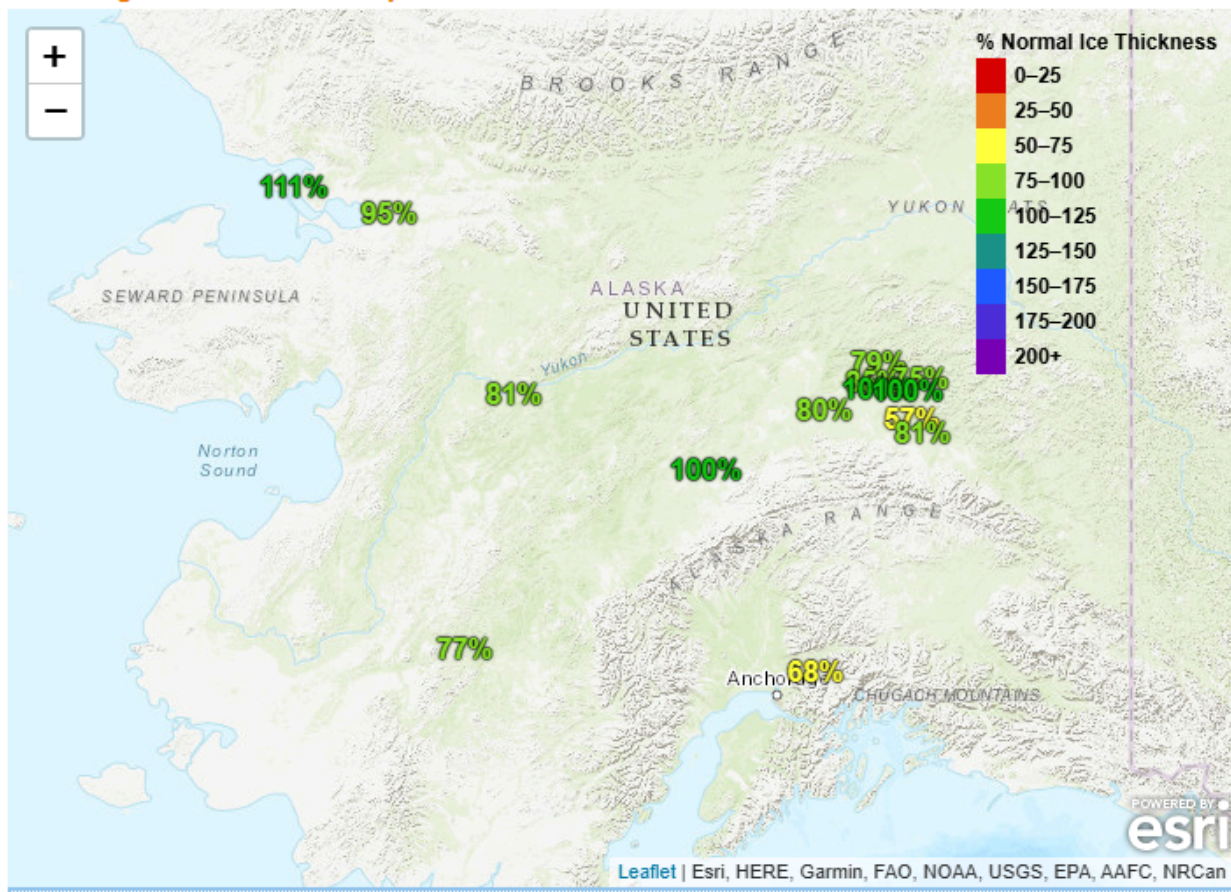
## Spring Breakup Outlook for Alaska

Valid April 25, 2025

### River Ice Observations

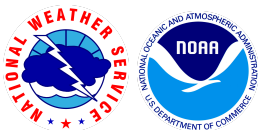
River ice observations are available for a limited number of sites in Alaska. Measurements from early April indicate that ice thickness across the state is generally near to below normal. In the Interior, ice thicknesses generally range from 80% to 100% of normal. The ice road across the Yukon River at Dawson closed on April 7th, approximately 2 weeks earlier than normal. Reports from the Yukon Territory indicate general average ice thickness with slightly above average thickness on the lower Porcupine River. Additionally, the ice road on the Kuskokwim River closed on April 14th due to rapidly deteriorating conditions.

### % Average Ice Thickness Map



April 2025 Percent of Normal Ice Thickness

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



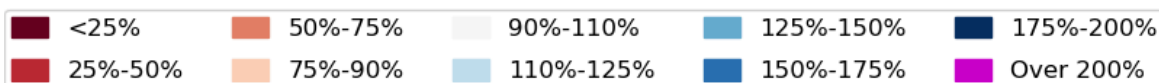
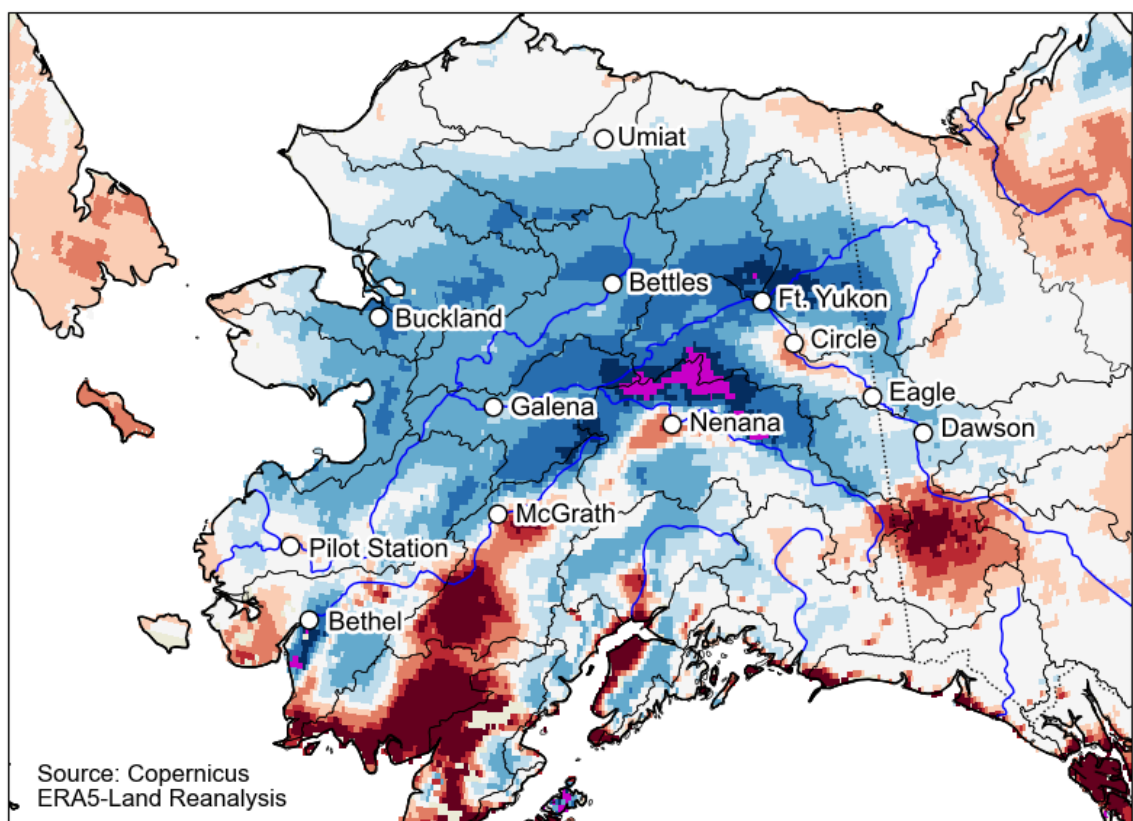
## Spring Breakup Outlook for Alaska

Valid April 25, 2025

### Snowpack

Snowpack conditions across Alaska remain highly variable, as shown by the ERA5 SWE estimates updated through April 20th. The Chena Basin and other interior rivers extending into the Brooks Range have a well above average snowpack. In contrast, the Canadian portion of the Yukon River Basin ranges from below average at the headwaters to above average near Dawson City. The Porcupine River basin also has above average snowpack, though it's only about half of last year's record levels. Low-elevation snowpack is largely depleted in the Tanana Valley and much of the Middle and Upper Kuskokwim River valleys. Along the Yukon-Kuskokwim Delta, only a thin and patchy snowpack remains. In Southcentral Alaska, snowpack strongly depends on elevation. Conditions are near normal above 1,500–2,000 feet, but remain well below normal at lower elevations. In the Copper River Basin, snowpack is near normal in the upper elevations and nearly depleted in the lower elevations, melting out earlier than normal.

### SWE % of 1991-2020 Median on April 20, 2025





## Spring Breakup Outlook for Alaska

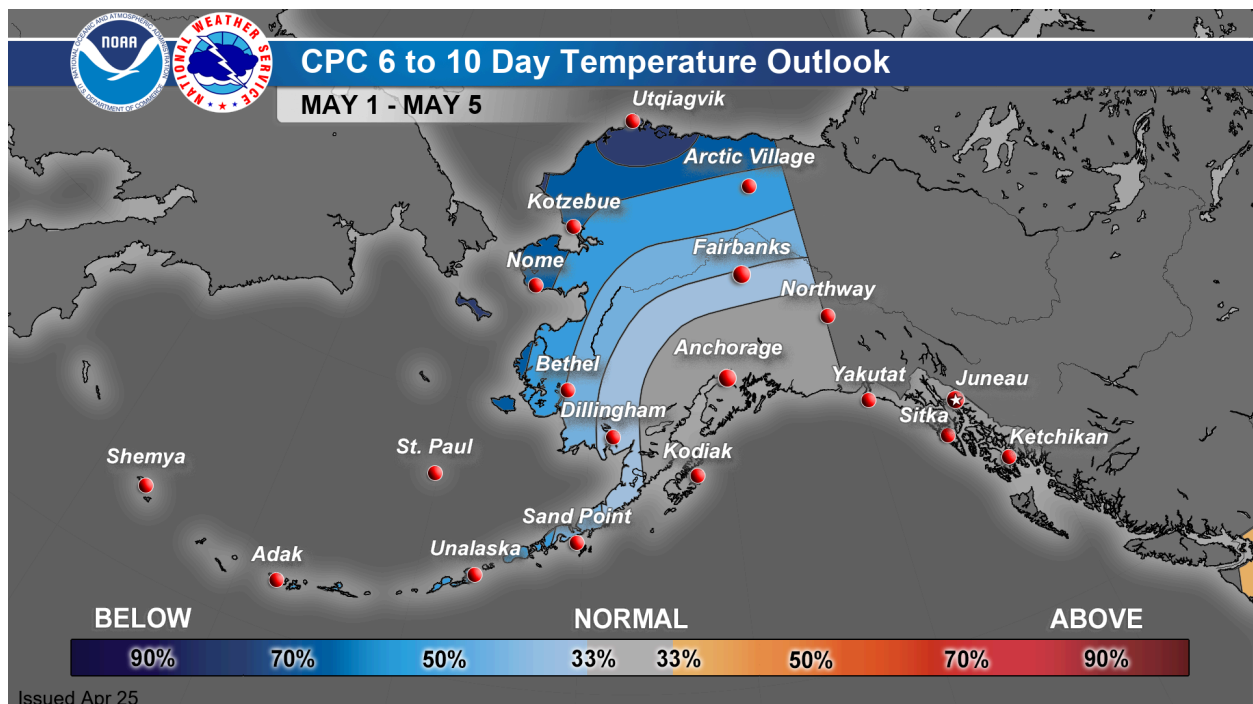
Valid April 25, 2025

### Climate Outlook

Spring temperatures in April and May are the most critical factor in determining the severity of ice breakups. Dynamic breakups, which carry a higher risk of ice jam flooding, typically require cooler-than-normal temperatures in early April, followed by a rapid warm-up to summer-like temperatures in late April or early May.

NOAA's Climate Prediction Center (CPC 8-14 Day) forecast for early May favors higher chances of cooler-than-normal conditions along the northern interior and north slope, and near-normal temperatures in the southern interior. The CPC forecasts for early-to-mid May (CPC Week 3-4) encompass the bulk of the breakup timing for the major interior rivers. This guidance continues to favor higher chances of warmer than normal temperatures across southern Alaska, and cooler than normal temperatures on the west coast between the Yukon Delta and Kotzebue; with the bulk of the interior being near normal temperatures.

This pattern may reduce the likelihood of a dynamic breakup in the Kuskokwim River basin. For the Yukon River basin, temperature forecasts between last week and this week are trending closer to climate normal, reducing the chances of a widespread dynamic breakup.

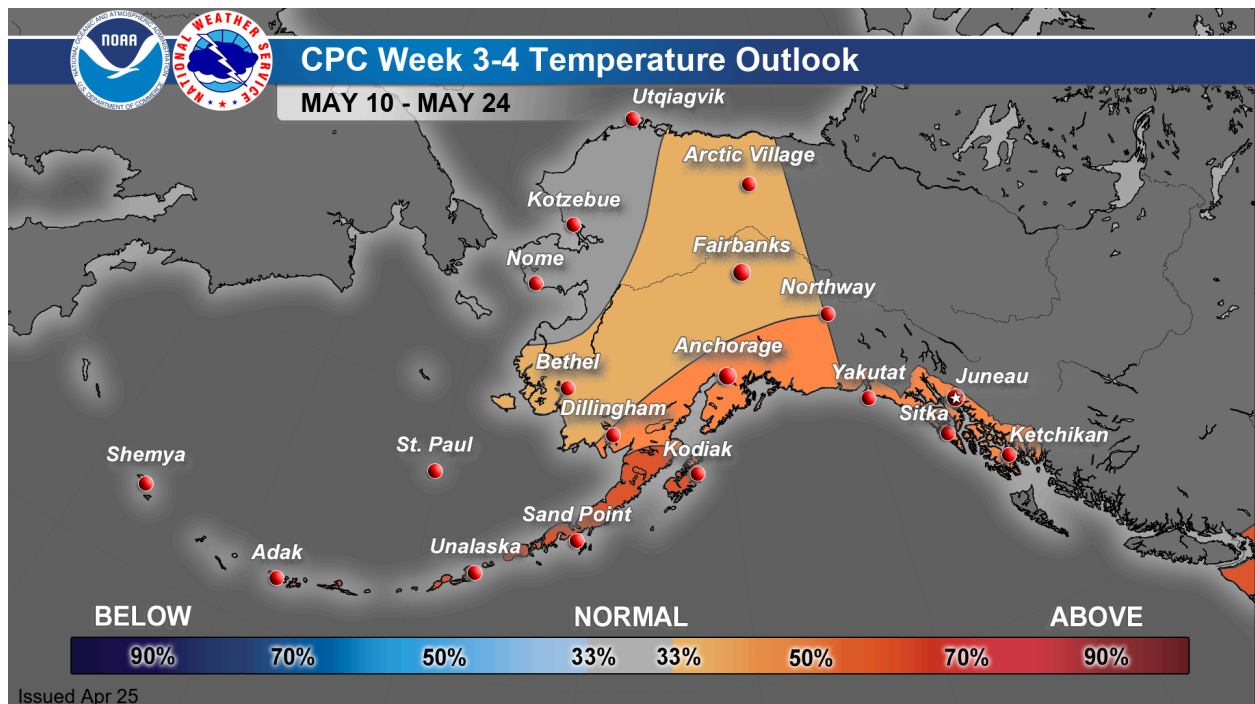
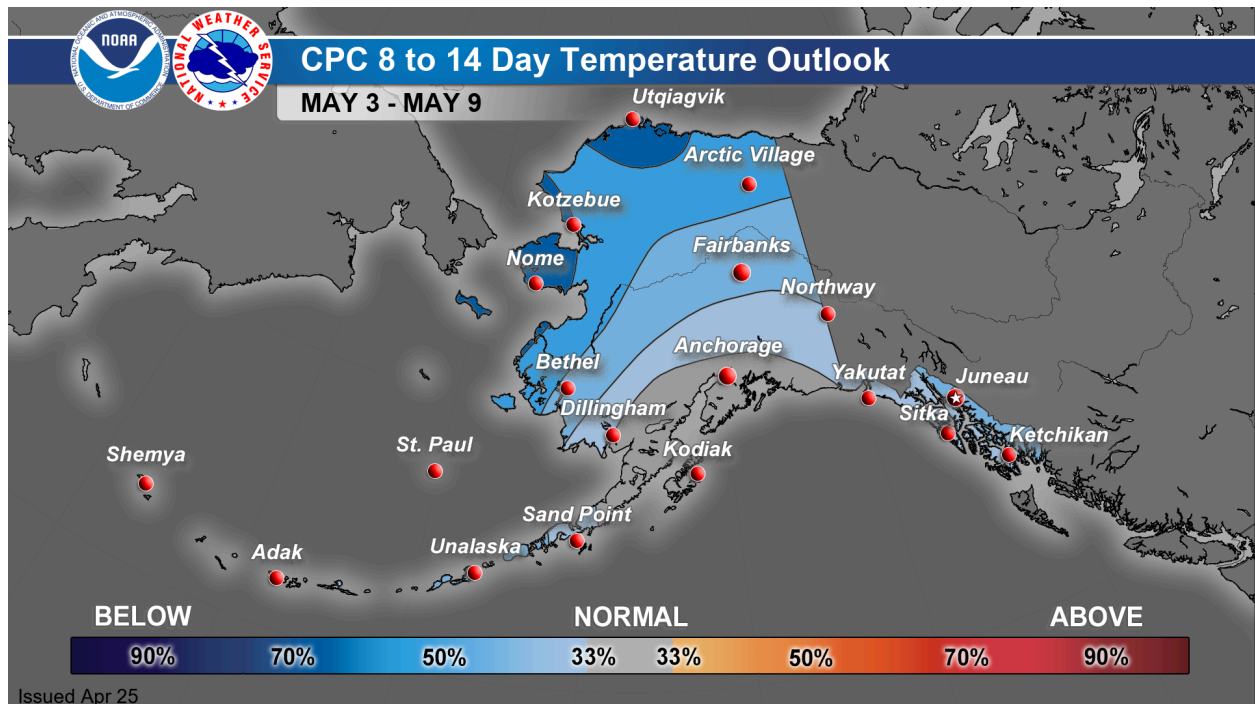






## Spring Breakup Outlook for Alaska

Valid April 25, 2025





## Spring Breakup Outlook for Alaska

Valid April 25, 2025

### Flood Potential

The likelihood of flooding from snowmelt and/or ice jams is initially estimated based on the flood frequency for the current 2000 to 2021 historical record and adjusted to reflect current conditions.

The following tables give an estimation of snowmelt runoff volume, flood potential, and forecast breakup date range for various locations across the state.

Median breakup dates are for the period 1980 through 2023 and are calculated for locations with at least 5 years of data.

Forecast breakup timing is expressed as a range based on snowmelt runoff volume and flood potential. Locations where breakup has already occurred are identified with two asterisks following a single date; for example, Kuskokwim River at Nikolai breakup occurred on April 22, 2025 (4/22\*\*).

### Tanana/Fairbanks

River-Reach	Location	Snowmelt Runoff Volume	Flood Potential	Median Breakup Date	Years of Record	Forecast Breakup Date Range
Chena River		Above				
	Chena Lakes Project		Low-Moderate			
Tanana River		Above				
	Northway		Low	4/26	32	4/23-4/29
	Salcha		Low	4/26	3	4/23-4/29
	Fairbanks		Low	4/30	22	4/27-5/3
	Nenana		Low	4/30	45	4/27-5/3
	Manley HS		Moderate	5/3	33	4/30-5/6

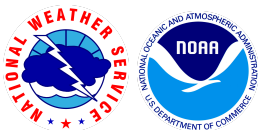




## Spring Breakup Outlook for Alaska

Valid April 25, 2025

Yukon River						
River-Reach	Location	Snowmelt Runoff Volume	Flood Potential	Median Breakup Date	Years of Record	Forecast Breakup Date Range
Yukon River (Upper)		Average				
	Dawson, YT		Low	5/4	45	5/1-5/7
	Eagle		Low	5/4	45	5/1-5/7
	Circle		Low-Moderate	5/9	41	5/6-5/12
	Fort Yukon		Low	5/11	41	5/8-5/14
	Beaver		Low	5/11	28	5/8-5/14
	Stevens Village		Low	5/11	26	5/8-5/14
	Rampart		Low	5/12	28	5/9-5/15
Yukon River (Mid)		Above				
	Tanana		Low-Moderate	5/8	40	5/6-5/12
	Ruby		Low	5/9	39	5/8-5/14
	Galena		Moderate	5/11	44	5/10-5/16
	Koyukuk		Moderate	5/10	18	5/9-5/15
	Nulato		Low	5/12	27	5/11-5/17
	Kaltag		Low-Moderate	5/12	39	5/11-5/17
	Anvik		Low-Moderate	5/14	36	5/13-5/19
Yukon River (Lower)		Average				
	Holy Cross		Low	5/14	38	5/13-5/19
	Russian Mission		Low	5/15	38	5/14-5/20
	Marshall		Low	5/15	33	5/14-5/20
	Pilot Station		Low	5/13	28	5/12-5/18
	Mountain Village		Low	5/15	38	5/14-5/20
	Alakanuk/Emmonak		Low-Moderate	5/20	39	5/19-5/25

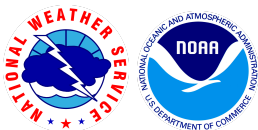


## Spring Breakup Outlook for Alaska

Valid April 25, 2025

Kuskokwim River						
River-Reach	Location	Snowmelt Runoff Volume	Flood Potential	Median Breakup Date	Years of Record	Forecast Breakup Date Range
Kuskokwim River		Below				
	Nikolai		Low	4/23	39	4/22*
	McGrath		Low	5/4	45	5/3-5/9
	Stony River		Low	5/2	37	5/1-5/7
	Sleetmute		Low	5/1	36	4/30-5/6
	Red Devil		Low	5/3	39	5/2-5/8
	Crooked Creek		Low	5/4	39	5/3-5/9
	Aniak		Low-Moderate	5/5	42	5/4-5/10
	Kalskag		Low	5/5	36	5/4-5/10
	Tuluksak		Low	5/7	33	5/6-5/12
	Akiak		Low	5/8	39	5/7-5/13
	Kwethluk		Low-Moderate	5/5	13	5/4-5/10
	Bethel		Low	5/9	45	5/8-5/14
	Napakiak		Low	5/10	30	5/9-5/15

Southeast-Southcentral						
River-Reach	Location	Snowmelt Runoff Volume	Flood Potential	Median Breakup Date	Years of Record	Forecast Breakup Date Range
Southeast		Below	Low			
Kenai River		Below	Low			
Anchor River		Below	Low	4/17	16	4/14-4/20
Matanuska River		Below	Low			



## Spring Breakup Outlook for Alaska

Valid April 25, 2025

Susitna River		Average				
	Gold Creek		Low-Moderate	5/2	9	4/29-5/5
	Sunshine		Low	5/2	36	4/29-5/5
Talkeetna		Average				
	Talkeetna			4/28	5	4/25-5/1
Yentna River		Average				
	Lake Creek		Low	5/1	33	4/28-5/4
Skwentna River		Average				
	Skwentna		Low	4/30	30	4/27-5/3
Copper River		Average				
	Gakona		Low	5/1	36	4/28-5/4
	Gulkana		Low	5/1	34	4/28-5/4

North Slope-Northwest						
River-Reach	Location	Snowmelt Runoff Volume	Flood Potential	Median Breakup Date	Years of Record	Forecast Breakup Date Range
Koyukuk River		Above				
	Bettles		Low	5/10	43	5/9-5/15
	Allakaket		Low-Moderate	5/11	38	5/10-5/16
	Hughes		Moderate	5/11	38	5/10-5/16
Seward Peninsula		Above				
	Buckland		Moderate	5/18	35	5/17-5/23
Kobuk River		Above				
	Kobuk		Moderate	5/14	40	5/13-5/19
	Shungnak		Low-Moderate	5/16	32	5/15-5/21
	Ambler		Low-Moderate	5/16	38	5/15-5/21



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Valid April 25, 2025

Noatak River		Average				
	Noatak		Low	5/19	27	5/16-5/22
Brooks Range		Above				
	Colville at Umiat		Low-Moderate	5/25	22	5/22-5/28
	Colville at Colville Village		Low-Moderate	6/3	23	
Sagavanirktok River		Above				
	Dalton Highway		Low-Moderate			12/27-1/2

\*Median break dates are for the period 1980 through 2023 and are calculated for locations with at least 5 years of data.

For more detail and to see the Flood Potential Map refer to the APRFC website at:  
<https://www.weather.gov/aprfc/floodpotential>

The next Spring Breakup Outlook will be published May 2, 2025.

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

Kyle Van Peursem, Acting Service Coordination Hydrologist  
 Alaska-Pacific River Forecast Center  
 Anchorage, AK 907-266-5155  
 Email: [kyle.vanpeursem@noaa.gov](mailto:kyle.vanpeursem@noaa.gov)