Spring Breakup Outlook for Alaska
Valid May 2, 2025
Alaska-Pacific River Forecast Center
Next Product Issuance: May 9, 2025
www.weather.gov/aprfc

EXPERIMENTAL PRODUCT
Spring Breakup Outlook for Alaska

Updates from the previous Spring Breakup Outlook

Breakup has begun in earnest across Alaska.

Kuskokwim: After Nikolai broke up on April 22nd, Stony River followed on April 27th. The breakup front continued to progress downstream along the Kukokwim River. Please see the table below for additional breakup dates. The breakup front has stalled and is located somewhere between Aniak and Kalskag. Elevated water levels were reported in Aniak, but no significant flooding has been reported.

Interior Alaska-Yukon: Across the Canadian border, the Yukon River at Dawson broke up on the 30th of April. The breakup front moved downstream and passed through Eagle on the 1st of May. After that, the breakup front stalled, allowing for some higher water between Eagle and Circle. As of today, the breakup front is upstream of Circle. Ice coverage and strength appears to increase along the river after Circle, so we will closely monitor how the front progresses in the coming days. The Tanana River broke up at Nenana on April 27th and Manley Hot Springs broke up today.

Across interior Alaska, mild temperatures—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 slowed ice decay in the lower Yukon and Kuskokwim Rivers, though snowpack in these areas remains mostly depleted in low elevations.

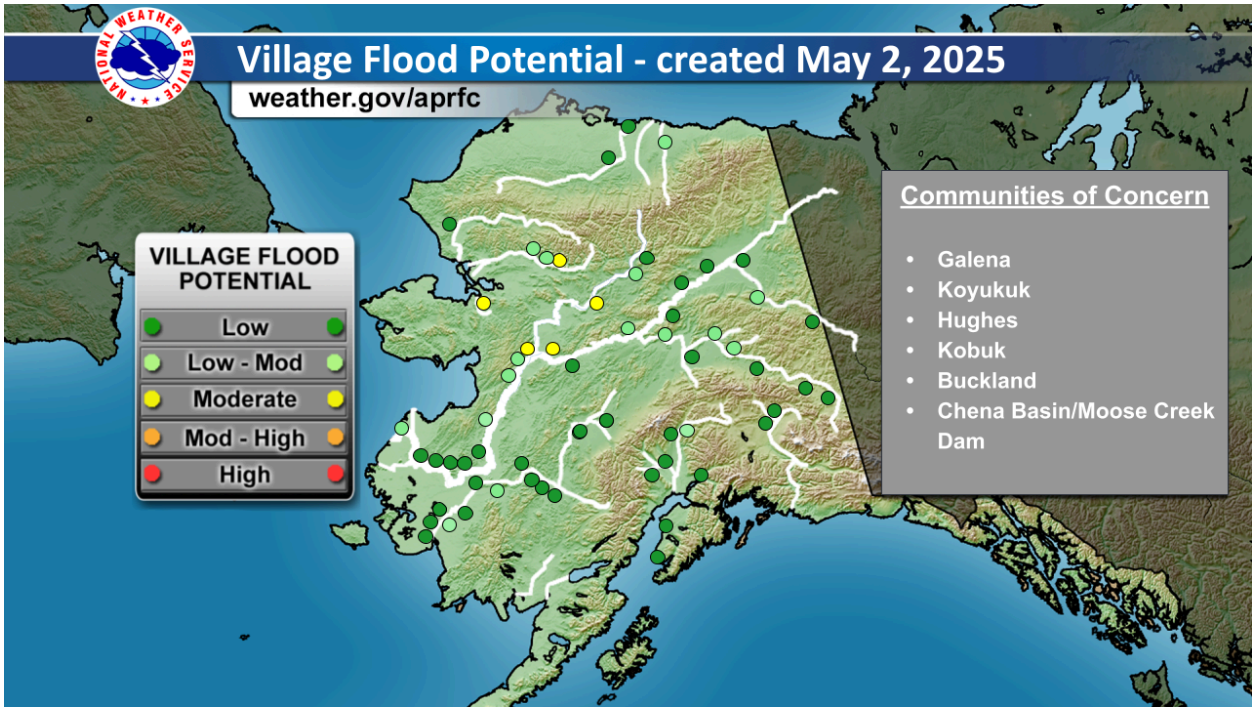
There are no significant changes to the breakup flood outlook. The **Middle Yukon, Koyukuk, Kobuk, Buckland and eastern North Slope Rivers** remain the primary areas of concern for ice jam flooding this season. Additionally, rivers draining the White Mountains north of Fairbanks—including the **Chena 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 cooler temperatures that have persisted into early May. In contrast, portions of the Lower Yukon and Kuskokwim River basins, along with most of Southcentral Alaska, can expect a 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.



Timing of River Ice Breakup

Now that breakup has begun along mainstem rivers, daily timing updates will be provided by the River Watch Teams and the APRFC. Please see the table below for previously forecast breakup dates.

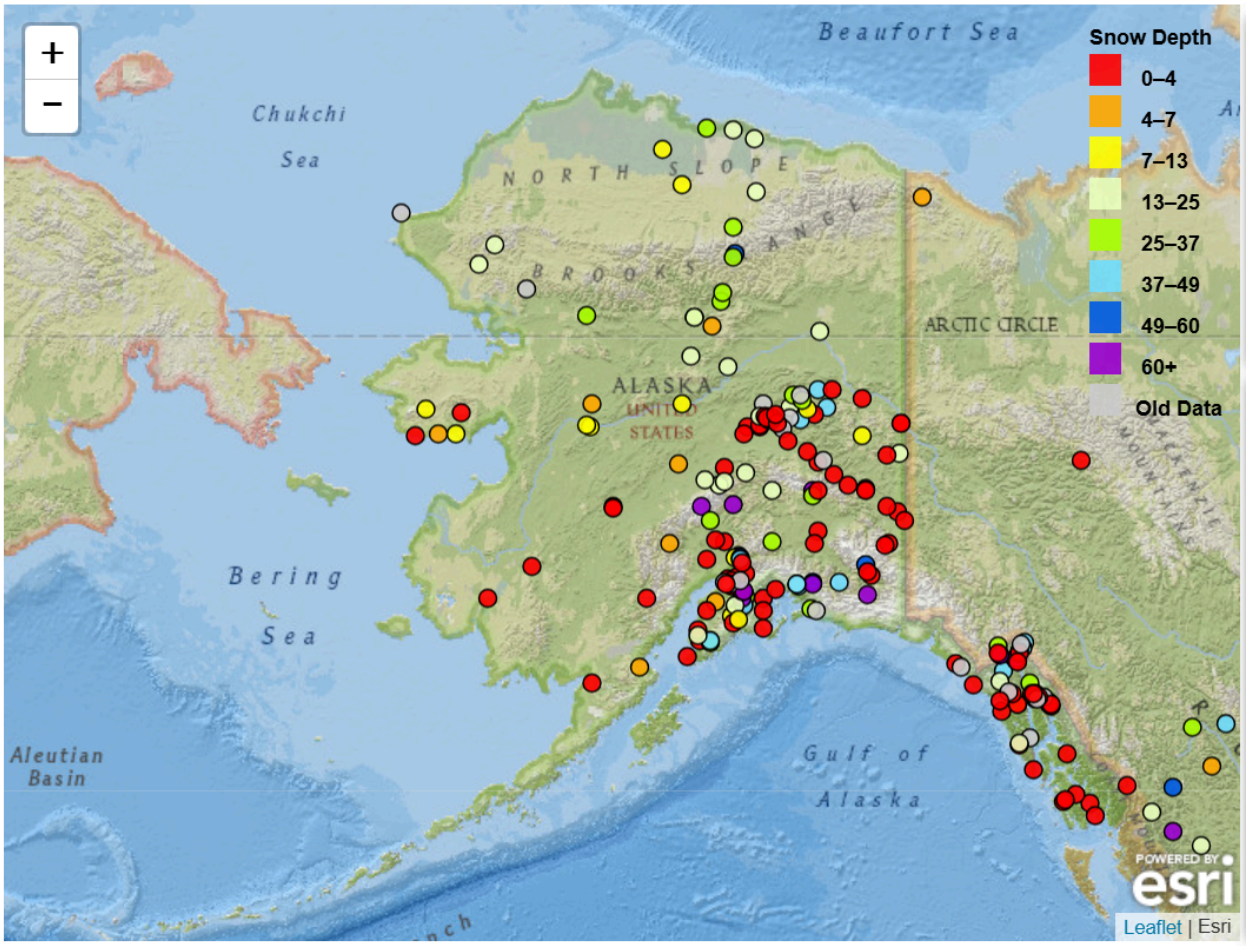
River Ice Observations

No longer included due to inconsistency and variability across the state.

Snowpack

Snowpack conditions across Alaska remain highly variable. The lower elevations of the Kuskokwim River Valley are almost completely snow free. The same is largely true for the lower elevations of the Tanana Valley. It is a different story for the Upper Chena Basin and the Porcupine Mountains. Due to colder April temperatures, snow remains much above normal for these areas. The same is true for the Koyukuk and other interior rivers fed by the Brooks Range. In Southcentral Alaska, snowpack is highly dependent 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.

Snow Depth - 05-02-2025 10:11



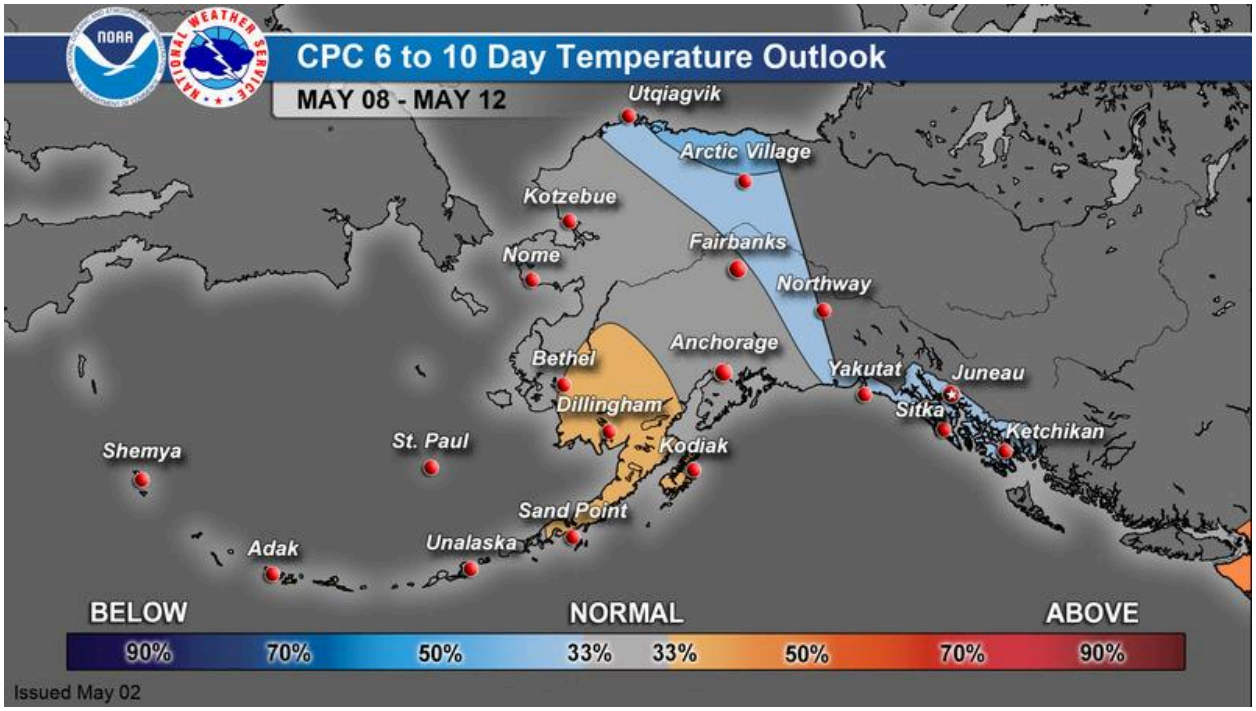
Climate Outlook

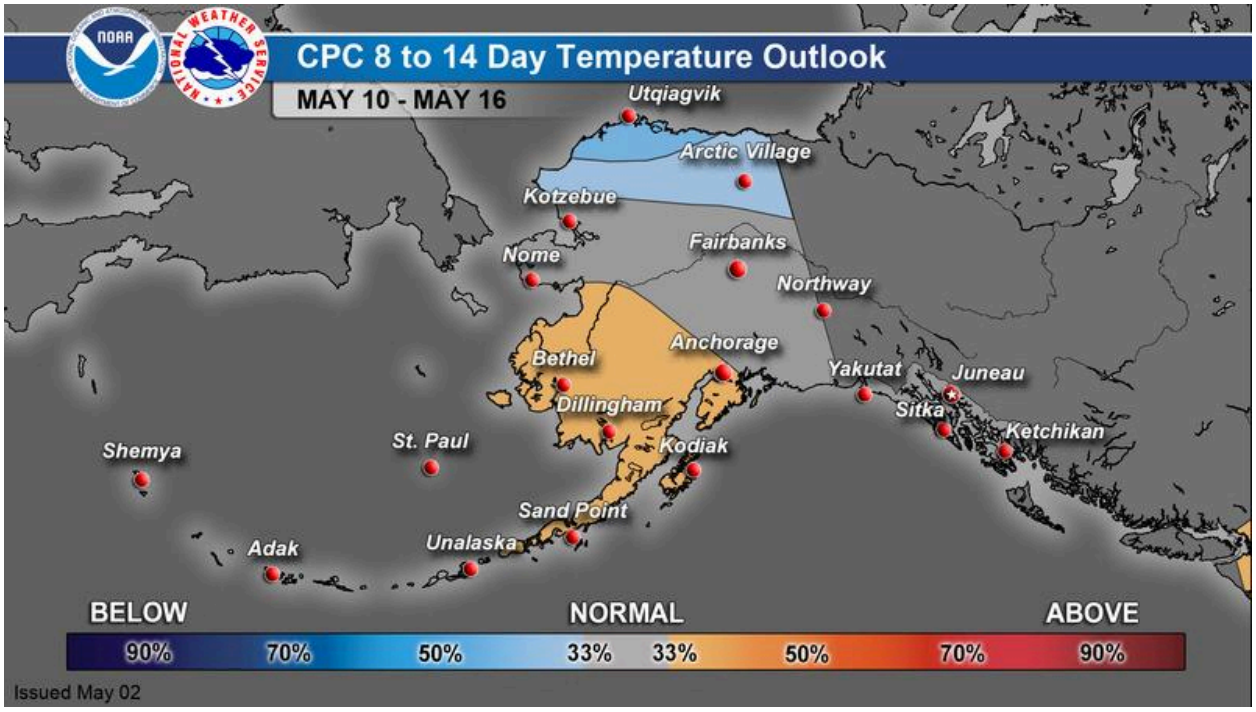
Spring temperatures in April and May are the most critical factor in determining the severity of ice breakups. Dynamic breakups, which carry a higher risk of ice jam flooding, typically require cooler-than-normal temperatures in early April, followed by a rapid warm-up to summer-like temperatures in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

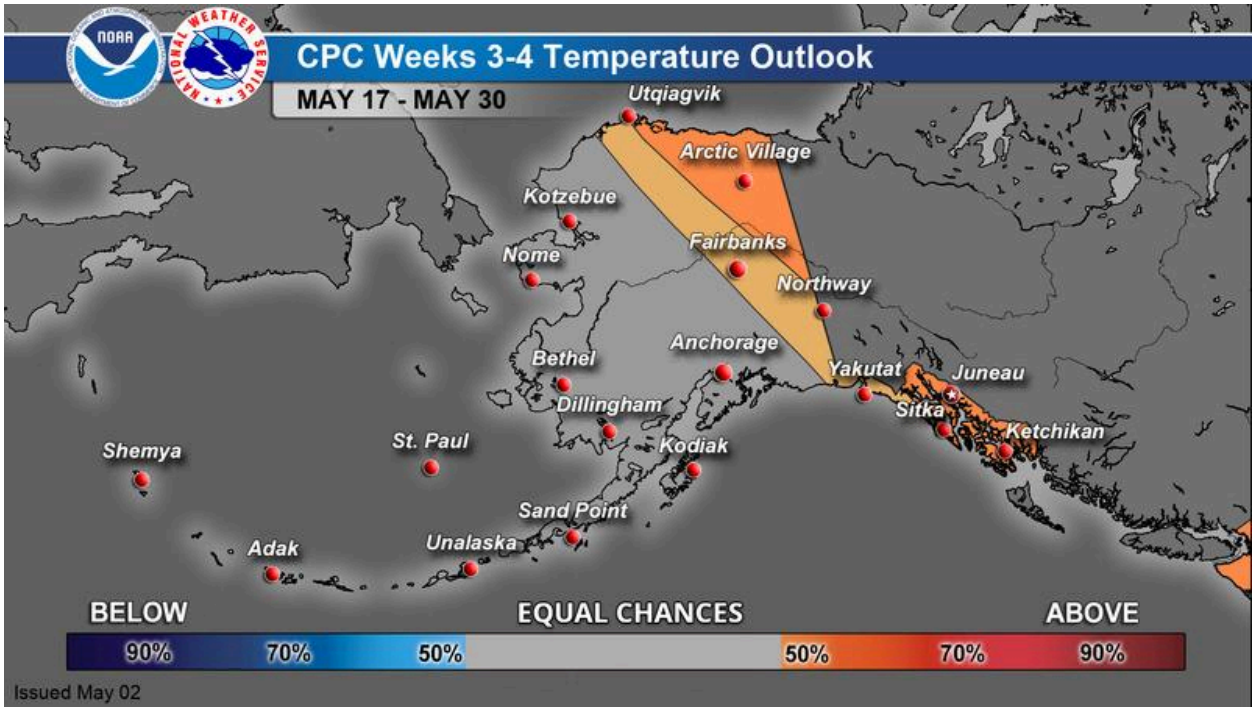
NOAA's Climate Prediction Center (CPC 8-14 Day) forecast for early to mid May favors higher chances of cooler-than-normal conditions along the northern interior and north slope, near-normal temperatures in the southern interior, and higher chances of warmer-than-normal conditions in Southwest Alaska including the Y-K delta and Bristol Bay. This encompasses the bulk of breakup timing for the major interior rivers. Week 3 to 4 guidance favors higher chances of warmer than normal temperatures in the eastern interior. As of today, May 2nd, breakup is in

progress in the eastern interior, thus a week 3 to 4 warmup will have no effect on the potential for breakup flooding.

This pattern may reduce the likelihood of a dynamic breakup in the Kuskokwim River basin. Temperatures over the last week have generally been warmer than normal at night and colder than normal during the day over the interior. Forecasted temperatures over the next week follow the same trend. This is typical of a progressive, rainy pattern and does not significantly affect the likelihood of dynamic breakup over the upper and middle Yukon.




CPC 8 to 14 Day Temperature Outlook
MAY 10 - MAY 16
Utqiagvik
Arctic Village
Kotzebue
Nome
Fairbanks
Northway
Anchorage
Bethel
Yakutat
Juneau
Dillingham
Sitka
Ketchikan
Shemya
St. Paul
Kodiak
Sand Point
Adak
Unalaska
BELOW
NORMAL
ABOVE
90%
70%
50%
33%
33%
50%
70%
90%
Issued May 02


CPC Weeks 3-4 Temperature Outlook
MAY 17 - MAY 30
Utqiagvik
Arctic Village
Kotzebue
Nome
Fairbanks
Northway
Anchorage
Bethel
Yakutat
Juneau
Dillingham
Sitka
Ketchikan
Shemya
St. Paul
Kodiak
Sand Point
Adak
Unalaska
BELOW
EQUAL CHANCES
ABOVE
90%
70%
50%
50%
70%
90%
Issued May 02

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			4/23**
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	4/30**
	Nenana		Low	4/30	45	4/27**
	Manley HS		Low-Moderate	5/3	33	5/2**

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	4/30**
	Eagle		Low	5/4	45	5/1**
	Circle		Low-Moderate	5/9	41	5/5-5/11
	Fort Yukon		Low	5/11	41	5/6-5/12
	Beaver		Low	5/11	28	5/7-5/13
	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

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	5/1-5/7
	Stony River		Low	5/2	37	4/27**
	Sleetmute		Low	5/1	36	4/27**
	Red Devil		Low	5/3	39	4/28**
	Crooked Creek		Low	5/4	39	4/28**
	Aniak		Low-Moderate	5/5	42	5/1**
	Kalskag		Low	5/5	36	5/2-5/8
	Tuluksak		Low	5/7	33	5/3-5/9
	Akiak		Low	5/8	39	5/4-5/10
	Kwethluk		Low-Moderate	5/5	13	5/4-5/10
	Bethel		Low	5/9	45	5/5-5/11
	Napakiak		Low	5/10	30	5/6-5/12

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	Early April**
Matanuska River		Below	Low			

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	4/23**
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

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 9, 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