



# What's up with Yukon's rivers: 2019 review

## Winter 2019 snow conditions

- The end of March was very warm, causing a significant depletion of the snowpack in many regions.
- At the beginning of April, there was a record low snowpack in most southern and central Yukon watersheds. In northern Yukon, the snowpack was slightly above average.

## 2019 river ice breakup

- A thermal breakup occurred in Dawson in late April. Ice movement first occurred on April 23 followed by a passive evacuation of remaining ice on April 29. As a result, water levels at Dawson remain far below flooding thresholds.
- A dynamic breakup occurred in Old Crow on May 15, which resulted in high water levels. There was no significant ice jamming and the ice cover was immediately evacuated.



River ice breakup in Old Crow on May 15, 2019.  
Photo credit Tyler Williams

## 2019 Freshet

The freshet is the flow in rivers caused by snowmelt runoff and usually extends over several weeks.

- On May 17, Old Crow saw a significant freshet flow that almost resulted in minor flooding
- Close to historical minimum water levels were recorded in most of southern and central Yukon watersheds during and after the freshet period.
- Historical low freshet volumes were recorded at Mayo Lake, which continued to affect hydroelectricity production into 2020.

## Summer 2019

- Very high air temperatures caused significant glacier melt and consequent high flows in the Alsek River with record peaks in July. The Southern Lakes faced similar conditions, despite lack of rain and high altitude snowmelt runoff.
- A rainstorm on June 17 produced high flows in eastern Yukon on June 19.
- A rainstorm on June 21 affected the Kluane Lake area, producing high flows in small watersheds.
- Rainstorms in mid-August affected northern Yukon, producing moderately high flows in small tributaries of the Peel and Porcupine Rivers.

## 2019 Fall Conditions

- A cold spell in mid-August significantly reduced glacier melt contribution in southern Yukon rivers.
- Very dry and warm conditions were recorded during the first half of September. After September, weather conditions returned closer to normal, with some pre-winter rain runoff.
- The timing of river ice freeze-up was normal for rivers in northern and central Yukon. In Dawson, the ice cover formed naturally, allowing for straightforward certification of an ice bridge to West Dawson.
- Freeze-up in southern Yukon was delayed by warmer-than-normal weather.