



# What's up with Yukon's Rivers: 2020 Review

## Winter 2019-20 Snow Conditions

- In early winter, snowfall was above average in central Yukon. Significant snowfall occurred in February in southern and central Yukon, resulting in record high snowpack in most southern and central Yukon watersheds at the end of winter.
- In northern Yukon, the snowpack was slightly above average, while in the southwest it was slightly below average.

## 2020 River Ice Breakup

- An ice jam on the Nordenskiöld River on April 22 caused localized flooding. Late April ice jams were also reported on the Indian River, Sixty Mile River, and Forty Mile River.
- The first ice movement occurred for the Yukon River at Dawson on May 3 followed by short-lived ice jamming. Moderate ice jamming and minor flooding occurred at some locations on the Klondike River in early May.
- A dynamic breakup occurred in Old Crow on May 12, which resulted in high water levels and minor flooding due to short-lived ice jams slowing down the ice run.

## Summer 2020

- Continuous rainstorms in mid-June resulted in high flows in many basins including the Liard, Upper Yukon and Klondike. Resulting peak flows were higher than freshet peaks in many rivers.
- Minor flooding occurred in Rock Creek outside of Dawson City on June 23 from high Klondike River flows – almost 700 m<sup>3</sup>/s, the second highest flow on record.
- Rainstorms from August 14 to 16 produced high flows in the Kluane Lake region, and resulted in a landslide on August 17 that blocked the Alaska Highway south of Kluane Lake for over 12 hours.
- High freshet volumes and above average summer rainfall resulted in substantial recharge in lakes. Both the Mayo and Aishihik reservoirs rose from historic low levels in April to reach historic maximum levels in August, requiring the release of water at control structures for both sites.

## 2020 Fall and 2020-21 Early Winter Conditions

- Flows remained higher than normal for many rivers before freeze-up, including the Yukon, Stewart, Pelly, Liard and Peel.
- Snow accumulation began quickly in Whitehorse and southern Yukon with record-breaking snowfall on November 1-2.
- An atmospheric river brought significant snowfall to southwestern Yukon on December 1 followed by unseasonably warm weather and rain on December 2-3.
- Dynamic freeze-up in Carmacks on November 27 resulted in minor flooding.

## 2020 Freshet

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

- Melting of the significant snowpack was tempered by cool weather in May, slowing runoff and resulting in limited flooding.
- Most creeks and rivers peaked from snowmelt in late May or early June, although considerable rain in June in central and southern Yukon resulted in flows remaining high in these regions until late June.

High freeze-up water levels in Carmacks on December 3, 2020  
Photo credit: Gerry Trudeau

