



Klondike River and Yukon River at Dawson Ice Breakup Forecast

May 02, 2023 at 1:00 p.m.

Key message

Water levels have continued to increase slowly. Forecast uncertainty is high owing to the delayed thaw.

Klondike River: Moderate potential for flooding, ice jamming is more likely near the mouth.

Yukon River: Moderate probability of sudden rise in water levels due to ice jamming as early as this weekend. Higher than average breakup water levels are expected. Flood potential is low.

Recent conditions

Over the last week overnight refreezes have continued in the Klondike and much of the territory. More recently the southern half of the Yukon has been slightly warmer than the Klondike resulting in more snowmelt in the south. Cloudy conditions have been more prevalent than usual and April was a wetter than average month in most locations. The late melt has resulted in increases to the relative snowpack percent of normal across most of the territory.

Current conditions

Overnight re-freezes have continued for the Klondike region over the last week limiting increases in flows. Flows in all systems are now increasing including the Klondike River. Smaller tributaries are beginning to open up and flows are starting to rise. The ice cover on the Klondike is now degrading with many open leads and wet snow and ice visible while the Yukon River shows less decay but does show some growing areas of open water.

Weather forecast

The current Environment Canada forecast for Dawson calls for a mix of sun and cloud with some potential for snow or rain today and Saturday. Strong overnight freezes are forecast for the next three days and then lows are expected to be closer to zero again.

Breakup forecast

Later winter snowfalls, more cloud than usual and overnight freezes have all contributed to delayed ice decay on the Klondike and Yukon Rivers. The rate of rise is expected to continue slowly increasing over the next few days. While the current forecast favours a more thermal breakup on the Klondike River, the lack of visible degradation and downstream freeze-up conditions on the Yukon suggests a dynamic breakup is still possible. A sudden sustained rise of air temperatures above 15°C in the next 7 days is likely to result in a more severe breakup.

Klondike River: Water level increases will continue to be slow over the next few days. Ice movements may begin by the end of the week with breakup possible this weekend. Ice jamming is still possible and could be more severe at the mouth given the limited degradation of the ice on the Yukon River. Flood potential is moderate.

Yukon River: The ice cover remains mostly intact with delayed deterioration. While model uncertainty is high, current model results indicate that the Yukon River at Dawson is unlikely to breakup prior to May 7, unless temperatures exceed forecast daytime highs and the rate of water level rise increases more rapidly than expected. The potential for a sudden rise in water levels caused by ice jamming is considered moderate in Dawson starting next week, with a low probability of flooding.

The situation is being closely monitored. Any relevant information or observations are appreciated.

Contact

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