

2015 Athabasca River at Fort McMurray Report No. 1

On Tuesday, April 7, 2015, the Athabasca River at Fort McMurray broke up. Ice movement upstream of Crooked Rapids initiated an ice run that passed Fort McMurray in the early morning. This ice run continued for more than 4 hours, and jammed 12 km downstream of the Hwy 63 bridges. A 22 km long ice jam backed up through Town to approximately 10 km upstream of the bridges. The ice run was strong enough to force ice up the Clearwater River for about 3 kilometres causing some localized flooding in low-lying areas at the Syne.

An observation flight of the Athabasca River was subsequently conducted by Alberta Environment and Sustainable Resource Development. The flight covered an approximately 60 km reach of the Athabasca River from just upstream of Crooked Rapids (km 340) to near Willow Island (km 279). The flight showed that the river channel between Crooked Rapids and Fort McMurray was clear, with a steady incoming flow of ice (approximately 10-40%). The ice flow was still in motion between Crooked Rapids and km 305 at that time.

Observation Details

Athabasca River:

- Crooked Rapids (km 340) to km 307 – The main channel is clear of ice. Stranded ice remains on the banks. High shear walls, created by the ice jam and ice run, line the river banks starting upstream of Crooked Rapids (km 340) and continuing downstream into the ice jam. The incoming ice flow had a surface concentration between 10-40%.
- At km 306, the incoming ice run surface concentration increased to close to bank to bank and was moving slowly.
- From km 305 to 283 – Ice jam is stationary. Shear walls have formed along the banks, showing that water levels are lower than when the jam initially pushed in. Side channels in this reach have been filled with stranded ice from the ice run. Immediately downstream of the ice jam is an open pocket before an intermittent ice cover starts.
- From km 283 to Stony Island (km 277) – Deteriorated but intact ice cover with some open leads developing.

Clearwater River:

- Broken ice from the Athabasca River ice run has been pushed up the Clearwater River for approximately 3 kilometres. The backwater from the shoved ice is causing some localized flooding at the Syne. Upstream of the 3 kilometre location, the ice cover remains intact with signs of deterioration only just beginning to show.

The most current information with interactive maps and photos is posted on the Alberta Environment web site at <http://www.environment.alberta.ca/forecasting/RiverIce/index.html>

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