

SAINT JOHN RIVER

NATURE'S TUG-OF-WAR HAPPENS HERE



THE REVERSING FALLS RAPIDS

The Reversing Falls Rapids are created by the daily collision of the Bay of Fundy and the Saint John River. At different points in the tide cycle, there are three distinct interactions between these two great bodies of water:



Water flow: into the Bay

Water features: whirlpools and rapids

LOW TIDE

At low tide the full flow of the 724.5 km (450 mile) Saint John River rolls and swirls through the narrow gorge between Fallsview Park and the Irving pulp and paper mill. Look for the high-water mark on the rocks at the shoreline.

SLACK TIDE

Slack tide only lasts for about 20 minutes, and happens when the Bay of Fundy waters begin to rise and slow the river's flow, eventually stopping the flow completely. This is the only time that sail boats and pleasure crafts can sail between the Bay of Fundy and the Saint John River.



Water flow: stalled

Water features: flat calm

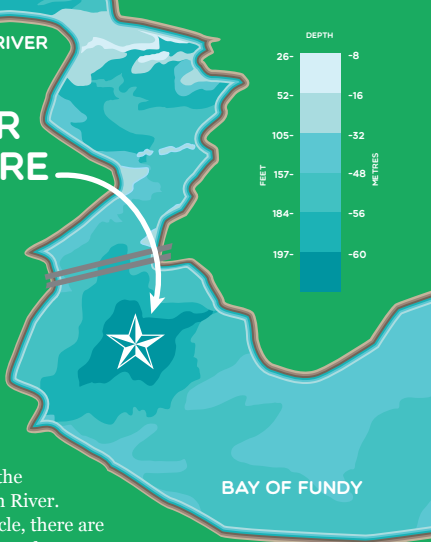
HIGH TIDE

At high tide the Bay of Fundy tide continues to rise, gradually reversing the flow of the river, and rapids form again, peaking at high tide. The effects of this reversal can be felt upstream, more than 128.7 km (80 miles) inland.



Water flow: up river

Water features: standing waves



WHY IS IT CALLED THE REVERSING FALLS RAPIDS?

The actual falls are hidden beneath the surface. The riverbed is carved out just like a waterfall, with a ledge and a plunge pool. The ledge is 11 metres (36 feet) below the surface and the plunge pool is 61 metres (200 feet) below the surface.

BAY OF FUNDY

TIDE BASICS

Tides are the periodic rise and fall of the ocean caused by the gravitational pull of the moon and the sun on the Earth. The Bay of Fundy's tides are the highest in the world because of its size, its shape, and something called resonance – when water moves back and forth at a specific speed over a specific distance, causing waves to build and become larger.

THE BAY OF FUNDY TIDES



The Bay of Fundy is home to the world's highest tides. At its highest, the Bay of Fundy tide reaches 17 metres / 56 feet: the height of a 5 storey building!

In Saint John, the Bay of Fundy tide reaches as high as 8.5 metres (28.5 feet). At high tide the Bay of Fundy tidal waters are 4.4 metres (14.5 feet) higher than the river and at low tide the tidal waters are 4.4 metres (14.5 feet) lower than the river.



A full tide cycle takes 12 hours, 25 minutes. From high to low tide takes 6 hours, 13 minutes.