	Feet.
Highest high water observed in the season of 1898; August 31st, p.m	117.06
tide levels adopted by the Fuone works Department, for the construction of wharves :	
High water spring tides	118.06
High water neap tides	108.56
Cap of Dunlap's wharf, at the south-west corner, where the tide gauge was placed.	
Elevation in August, 1898.	118.98
Top of 12-inch iron pipe, forming the tide-well of the tide guage	100.66
Zero of Tide Scale of the guage ; being the level of the bottom of the tide-well,	
which is twelve feet deep	88.66
Low water spring tides : lowest observed during the spring tides at the beginnig	
of August and at the end of September, 1898	87.88
Lowest low water during the season of 1898: October 20th	87.81
Extreme low water, opposite the mouth of Hall's Creek ; as determined by Mr.	
McCready while City Engineer.	87.75

THE BORE AT MONCTON.

Monoton is situated on the Petitoodiac River, immediately above the point known as "The Bend," where its direction turns sharply at a right angle. This is at 19 miles above the mouth of the Petitoodiac, at Folly Point, where it enters the Bay of Fundy. This part of the river is more correctly an estuary, which continues 13 miles further up, as far as Salisbury Jonetion. At high tide the river at Monoton forms a sheet of water half a mile in width; while at low tide it consists of mud banks and flats, with a stream about 500 feet wide running with a strong current in a devious channel amongst the bars and mud flats, which are left dry at low water.

The run of the rising tide first breaks into a bore at Stony Creek, eight miles below Moncton; and it continues to the head of the estuary at Salisbury, 13 miles above. The total distance on the river that a bore occurs is therefore 21 miles.

With regard to the time of arrival of the bore at Moncton, this really corresponds with the time of half tide. At the central moment between the previous and the following high water, which we may term the theoretical time of low water, the level of the water in the river is still falling; and it continues to fall, though at a much slower rate, for about three hours longer before the bore arrives. The time of the arrival of the bore is, thus, only about three hours before the next high water, which serves to account for the very rapid rise which takes place after the bore passes.

The rate at which the tide fulls, amounts at its maximum, to eight feet per hour; but after the theoretical time of low water, the rate of fall soon becomes very slow, and the river appears to a casual observer, to remain at the same level for some two hours before the arrival of the bore. The flow, however, continues to be fairly swift; and it no doubt still consists of tide water. The rate of fall in the level of the water, as measured shortly after spring tides, was found to be as follows :---

rom	41 to 21	hours	before	arrival	of	bore,	rate of	fall six	inches per	r hour.
	21 to 1	hour						four	inches	
	40 m. to 1	5 m.						three	inches	

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The first observation of the bore was made on the evening of August 4th. The standpoint was the wharf furthest down stream, nearest to the bend. It commands a view of some two or three miles down stream below the bend, as well as the foreshore up-stream, opposite Monoton. The moon was a little past the full, and was well risen before the bore arrived; and the sky was then clear also. There was a very slight breeze and in the stillness sounds could be distinctly heard. It was thus at the spring tides, and 24 hours after the lowest of the tides at that moon.

The first sound of the approaching bore was heard at $23^{h} 08^{m}$, in 60th meridian time, and two minutes later the sound was quite distinct. This sound was very similar to the noise of a distant train when heard across water. It afterwards increased to the usual hissing and rushing sound of broken water, as in a rapid on a river; but there was no mingling in this sound, of any roar such as a waterfall makes when falling into deep

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