cross section would vary, for a very short distance, almost directly with the depth at the point; and the known mean velocities at the ten points were therefore plotted to suitable scale with the water surface in the cross sections at datum line; a curve drawn through the points thus obtained, and roughly parallel to the bottom of the river, was adopted as the mean velocity curve, the ordinates to which at each point would give the mean velocity of the river at the point.

The discharge was calculated by dividing the cross sections into narrow sections, the mean depths and velocities for which were obtained by scaling from the plotted curves and then multiplying the widths, depths and velocities together.

While on the survey, five separate parties made complete meter gaugings of the river, and their results are given in the following table. The weather prevailing while the work was in progress is also recorded for each measurement:—

Date 1902	Discharge in cu. ft. per second.	Ht. of River.	Weather Conditions.
Aug. 30...	1819	A.M. P.M. 3.18 Mean 3.18	Cloudy, moderate breeze up stream. A wet period had just preceded this day.
Sept. 2..	1648	3.25 to 3.10 Mean 3.17	Fair, with a stiff breeze from N.W. up the river ; river surface choppy. Rained heavily the preceding day.
Sept. 3..	1614	3.10 to 2.90 Mean 3.00	
Sept. 4..	1513	2.80 to 2.75 Mean 2.77	Cloudy ; heavy rain night of 3rd ; showery in forenoon light breeze in afternoon.
Sept. 10..	1719	3.10 to 3.10 Mean 3.10	Moderate breeze from N.W. up stream.