

ABSTRACT

The resistance to flow in rivers over the years has been largely an issue of great concern. There have been many suggestions as to how to compute the resistance to flow especially in a composite channel.

This work looks into the factors that contribute to the total flow resistance as a result of the elements that may be present in the body of water.

A critical review of previous work done to determine the total resistance to flow in a composite channel was made in this work and existing formulas were tested to see their reliability.

Ways of predicting resistance coefficients for individual elements were tested using those of James (2012), Meile et al. (2011) and Hirschowitz and James (2009).

This work has been limited to sparse arrangements of obstructions, vegetation and bank irregularities.

After careful observation, recording of data and analysis, formulas were developed for calculating the total resistance to flow for composite channel with permutations of three different elements these formulas were tested and seen to be useful in computing the total resistance to flow in a channel with low flow in a composite channel.