ABSTRACT

Rivers give many impacts in human activity since early civilizations. Nowadays rivers have been center activity of the engineers such as water supply, irrigation, water quality control, power generation, flood control, river regulation, navigation and recreation. The majority type of the rivers in the world is meandering river. And this research is discuss about the sediment transport in meander river with HEC-RAS.

Sediment transport in Meander River with HEC-RAS just could measure the total sediment by reach, because this software is one-dimensional modeling system. HEC RAS could not make the differentiation of the velocity and the condition in the curved channel. Therefore that’s need the better modeling system to knowing the distribution of sediment in each part of river. RMA.11 is better software which could model the sediment transport. Because it is three dimensional modeling systems which could seen the sediment capacity in all part of channels.

There are margin errors until 40% between HEC-RAS and manual analytical result. Because different sediment transport functions were developed under different conditions, a wide range of results can be expected from one of sediment to be other. The sediment transport computations have many variables that must be analyze. Therefore it is important to verify the accuracy of sediment prediction to an appreciable amount of measured data from either the study stream or a stream with similar characteristics. It is very important to understand the processed used in the development of the functions in order to be confident of its applicability to a given stream.

Keywords: Meander river, Sediment transport, HEC-RAS