

Contribution to the drawing up of boring curves: case of the Algiers in-shore watershed

The objective of this study is to develop efficient discharge estimate models, which are applicable to flows in the water courses of 'Algiers in-shore ' watershed, where a pronounced spatial and temporal variability of liquid flows is observed. The work consisted in defining all the geomorphological, geological, hydrological and climatic parameters of the sub-watersheds of the area purpose of the study, and in performing a quantitative and qualitative analysis of the stream discharges, the cross sections of a stream, the sediment discharges and the head measured at the hydrometric stations. This helped to draw models like "stream cross-section discharge" and "flow rate/head" for the purpose of extrapolating the maximum discharges without gauging for the wadis of 'Algiers in-shore' watershed. Entropy method application allowed quickly resulting in flood flows estimate, but not performing a full gauging. Considering the loose density of gauging system in the Algiers in-shore, a methodological approach is developed to estimate the rating curve on the basis of the watershed's hydro-climatic and morphometric characteristics. It goes by the linear multiple regression and the artificial neural networks concept.