1. **Suggested Model to Estimate Sediments Transport in Al- Diwaniyah River Based on Field and Laboratory Investigations**

**ABSTRACT**

In this paper an experimental (field and laboratory) study was conducted on measuring the amount of suspended sediment transport in Al- Diwaniyah River and introducing a new formula to estimate sediments transport in this river. The application of this study required the selection of 25 sections along the river and its branches and the hydraulic parameters of these sections as well as the slope of bed were measured, and many samples from the river were taken to the laboratory. Samples of suspended sediment in water were taken at each section in the river and analyzed in the laboratory. A new formula was introduced using the dimensional analysis and DataFit 9.1 software corresponding to the field and laboratory measurements in this study. The results were compared with other formulas such as Engelund – Hansen, Laursen, and Einstein formulas and indicate a good exception.