

عنوان مقاله:

Finite Volume Modeling for pollutant variation in Sorkhehesar River at Tehran Province

محل انتشار:

چهاردهمین کنفرانس ملی هیدرولیک ایران (سال: 1394)

تعداد صفحات اصل مقاله: 7

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خلاصه مقاله:

In this research, modeling pollutants of heavy metals involving concentration of heavy metals in Sorkhehesar River has been carried out. Lack of data's in this field of study in stations, made us to choose the main pollutant sources in which, contains the preliminary information, and It has been chosen for the case study in this research. Based on available data's and the purpose of this study, MIKE 21 software picked up. The basis of software is, Computational Fluid Dynamic. That depends on numerical solution, in which, flow problems were solved during these methods. Basis of the computing is finite volume and the effect of Prandtl model and Turbulence take into account in this two dimensional model. Necessary data's for simulation, such as time series and line series data were used in software. One of the benefits of this software is that the model contains interaction between hydrodynamic flow and eco-lab module in the simulation. Moreover, software has the capability of sediment transport simulation involving seeds and particles. After the initial run of the software, analyzing the hydrodynamic and eco-lab module parameters have sought. Further, the calibration of parameters by proposed amounts of software manual packs, were edited. At last, by adjusting the optimized amount for both hydrodynamic and eco-lab module in simulation, the last run of model is completed. Comparing of verified data's and observed data's of the real case, it seems that the model is compatible with the parameters of hydrodynamic and eco-lab in real data's. Cadmium is the most heavy metal pollutant part in this domain of research and extended beyond the allowable standard

کلمات کلیدی:

Modeling, MIKE 21, pollutant, Sorkhehesar River

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