

عنوان مقاله:

Assessment of Waste Load Allocation scenarios in a River

محل انتشار:

چهارمین کنفرانس بین المللی برنامه ریزی و مدیریت محیط زیست (سال: 1396)

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خلاصه مقاله:

One of the approaches for the water quality management of a river, which is in the center of attention today, is to allocate the exceeded waste load on the river among the pollutant sources that discharge their wastewater in the rivers. Selection of the best and most integrated management strategy and allocation approach is an ideal target which would result in the benefit of all stakeholders. In this regard, river water quality simulation models are efficient tools. In this study, Qual2kw model was used to simulate the water quality conditions in Gheshlagh River of Kurdistan, Iran. To allocate BOD load among the point sources, four allocation scenarios were executed in the model. These scenarios include equal removal percentage of BOD concentration of point sources, equal BOD concentration and equal BOD load of discharged sources and also a scenario called separation of the share of reaches. After analyzing the results of the scenarios in the river, AHP method was used to score the scenarios based on economic, social, and environmental factors. Finally, the scenario of separation of the share of reaches was selected as the best scenario. Under this scenario, each discharger, according to its contribution and the optimized usage of self-purification capacity of the river, is required to reduce the waste load in the river.

کلمات کلیدی:

River water quality management, Waste Load Allocation, Multi-criteria decision making, Qual2kw model

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