

Assessment quality water of Bahmanshir river by using indicators quality water BCWQI and Liou

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Abstract

Indices qualitative pollution is one of procedures involved in managing quality water can be a powerful management tool for decision-making, as an appropriate-use. In this paper, using done index quality water BCWQI and index pollution water Liou evaluate quality of river Bahmanshir. Sampling was within one year (2019) and 5 stations conducted. Quality parameters were investigated including: temperature, dissolved oxygen, biological oxygen demand, COD, pH, ammonia nitrogen, nitrate, phosphate, total dissolved solids, TSS, turbidity, electrical conductivity, total coliform and fecal coliform in the river. Data obtained from this study were analyzed by using Water Quality Index BCWQI and Liou. Results BCWQI index in five sampling stations show that all stations are in a state of quality water right to moderate. Most BCWQI index is in the second station in winter with score 34.13 and lowest BCWQI index is in the quarter station in summer with score 51.2. Results Liou index in five sampling stations show that best state of Liou index are in stations first and second in summer with score 3.25 and lowest Liou index are in first station in autumn and winter and in second station in winter with score 4.25 and all stations are in state relatively polluted quality water. Results of both BCWQI and Liou methods to assess quality water have overlaps.

Keywords: Pollution index, BCWQI, Liou, Quality water, Bahmanshir.