

PHYSICO-CHEMICAL CHARACTERIZATION AND WATER QUALITY INDEX (WQI) ASSESSMENT OF BHUSNOOR AREA, KALABURAGI DISTRICT, KARNATAKA

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Abstract

Water is essential for all biotic communities. Water quality depends on the local geology and ecosystem, as well as human activities such as sewage dispersion, industrial pollution, use of water bodies as a heat sink, and over use. The current work focuses on analysing the changes in physico-chemical properties of groundwater in and around the N.S.L Sugar Industry. It has been observed that TDS, Alkalinity, Fluoride, Total Hardness in some of the samples are well beyond the acceptable limits. Higher Alkalinity can be attributed to the Deccan Trap basalts of the region. Sample collected from the Amarjya Dam shows noticeable turbidity (Reservoir siltation). Water Quality Index (WQI) calculated for the area falls under poor drinking water category. By considering the sample points located at different distances from the sugar industry, is observed that, effluents from the industry is influencing ground water contamination over the region in terms of the considered parameters.

Keywords: NSL, Sugar Industry, Groundwater, Contamination, Fluoride.