Abstract

The Kharicut canal was constructed by British officials for irrigation purpose before some 100 years ago. The Kharicut canal is an extension from the Khari River, a tributary of the river Sabarmati. The industries on the bank of canal in Vatva area discharge their partially treated wastewater into the canal. The residents near the canal do not have proper facility for disposal of garbage; they also dump their garbage into the canal. From the data obtained it was known that since June 2011 no water is released from the Narmada canal into the Kharicut canal. So there is accumulation of garbage in the canal. Thus wastewater which now flows through the canal percolates through the wall of the canal and has a possibility of contaminating the ground water. This study features, establishing a relation between contaminants in the Kharicut canal and the ground water. For this purpose computerized models are available which can be used to model the Fate and Transport of contaminants. Spatial flow pattern of contaminants can be found using the Model software and GIS. Samples were collected from various locations i.e., from six locations from the Kharicut canal, four locations from the Sabarmati River and seven
different tube-wells (groundwater) every week. The results showed a wide variation in the quality of wastewater from Kharicut canal as the quality and quantity of the wastewater from industries keeps on varying. The quality of the Sabarmati River deteriorates after Narol Bridge as there is discharge of mixture of Sewage and Industrial effluent. The TDS of some samples from Bore-wells were not within permissible limit.

References

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Index Terms

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Keywords

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