

**An Integrated Approach for Evaluation of Surface Water Quality and
Its Suitability for Drinking and Agricultural Use in Jalgaon District,
Maharashtra, India.**

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Water is universal solvent which is use in every walk of life such as domestic, irrigation and industrial purposes. Only small amount of fresh water is available to us Industrial domestic and agricultural wastes are drained in surface water so the pollution of water increases day by day.

The present study area comes under semi arid climate zone. The physiography of study area is rugged and some where plain in central part. The area is covered by Quaternary Alluvial and Underlain by Deccan basalt of cretaceous to Eocene age. The area has different irrigation networks its water is use continuously for various purposes but the area facing the problem of water pollution. So the chemical quality of surface water is great importance in determining the suitability of water for specific use.

25 surface water samples were collected from different irrigation projects. The surface water was analyzed by the standard analytical procedures of APHA-AWWA-WPCF. The parameters includes pH, alkalinity, hardness, COD, BOD, TSS, chlorides, phosphate, nitrate, SAR, ESP etc. parameters were performed.

pH is significantly decreased with the increasing pollution load. Pollution load increases organic matter which is turn by decreasing DO and increasing HCO₃. From the

evaluation of carbonate hazards it is clear that the surface water is safe from bicarbonate hazards surface water quality of study area is somewhere suitable for Irrigation and domestic purposes.

Keywords -: Geology, Drinking water quality, Irrigation I water quality