GROUND WATER QUALITY ANALYSIS ATALAND TALUKA, KALABURGI DISTRICT, KARANATAKA.INDIA.

1. Vishwaradhya Meti. 2. Akarsh 3. Yogita

1, 2, M.Tech.1st Sem , Dept. of Construction Technology, School of Engineering,

3, MCA 3rd Sem , Dept. of Computer Application, School of Computer Science

Central University of Karnataka. Kadaganchi, Kalaburgi.-585367, Karnataka, India.

Corresponding Author: - Vishwaradhya Meti, **Mobile No**- +91 9742328686, **Email:** isct111@gmail.com

Abstract

Water is an essential natural resource for sustaining life and environment but over the last few decades the water quality is deteriorating due to it's over exploitation. Water quality is essential parameter to be studied when the overall focus is sustainable development keeping mankind at focal point. Groundwater is the major source of drinking water in rural as well as in urban areas and over 94% of the drinking water demand is met by groundwater. The study was carried out to assess the ground water quality and its suitability for drinking purpose in most rural habitations of Aland tehsil of district Kalaburagi, Karnataka, India. For this purpose, 10 water samples collected from hand pumps, open wells and bore wells of villages of study area were analyzed for different physio-chemical parameters such as pH, electrical conductivity, total alkalinity, total hardness, calcium hardness, magnesium hardness, chloride, nitrate, fluoride and total dissolved solids. pH value in the study area found from 7.4 to 9.2. EC ranges from 648-2107 µmhos/cm and total alkalinity between 110 to 440 mg/L. Total hardness ranged from 210 to 610 mg/L and. chloride from 170 to 354.5 mg/L. while value of TDS ranges from 303 to 866 mg/L. The study reveals that almost all parameters were exceeding the permissible Bureau of Indian standard limits. As per the desirable and maximum permissible limit for fluoride, nitrate, total dissolved solids and chloride in drinking water, determined by WHO and BIS standard, groundwater sources are unfit for drinking purposes respectively. Due to the higher TDS level in drinking water several cases after evaluating the data of this study it is concluded that drinking water of Aland tehsil is not potable and there is an instant need to take ameliorative steps in this region to prevent the population from adverse health effects.

Key Words: - TDS, WHO, Drinking,Rural.