

Hydrogeochemistry of Ground Water Quality in and Around Raghavendhra Nagar, Nacharam Industrial Area, Rangareddy District, Andhra Pradesh, India

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Ground water is one of the primary sources of water for human consumption, determination of physical and chemical quality of water is essential for assessing its suitability for various purposes like drinking, domestic, agricultural and industrial uses. As it is available from many researchers across the world. The vicinity of many industrial zones are practically prone to high level if major ions that are deviried from the discharge of poorly treated effluents to the land. The present study was undertaken on ground water contamination in Ragavendra Nagar, Nacharam Industrial area to determine the extent and to decline the source. Previously there is no treatment plant in industrial area recently constructing started. The industries are releasing the effluents into the near by nalas and lakes. Solid waste from the industrial is also dumped along the roads near the open ground due to which major ions migrate from solid waste to the groundwater.

The ground water sample (hand pumps and bore wells) were collected from the study area in clean plastic bottles and were analyzed for there physicochemical parameters (EC, pH, TDS, TH) and major elements were analyzed in Atomic Absorption Spectrophotometer (AAS). The pH ranges from 6.7 to 7.3, these values are in acidic nature, EC ranges from 2040 to 3460 these values are exceed permissible limits, TDS ranges from 1305 to 2214 with in the limits, and TH ranges from 272 to 1408. The samples were analyzed in water to determine the high concentration of some major cations and anions like K^+ , Na^+ , Ca^{+2} , Mg^{+2} , SO_4^{2-} , Cl^- , CO_3^{2-} , HCO_3^- could be due to the effluents from the Beverages, Automobiles, Battery manufacturing, Pharmaceutical and Chemical manufacturing industries the high concentration of Na, Mg and Cl present in our study area, that the source of these contaminations could be anthropogenic in nature.

Concentrations of these Major ions in ground water suggest them regular monitoring is needed. Further suitable measures can be studied.

Key words: Ground water Quality, Physicochemical Parameters, Major ions, Nacharam industrial area, Hyderabad