

Assessment of Groundwater Quality around Nagole in Hyderabad

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Abstract: *Water is one of the most essential elements for survival of living organism. Water consumption of a person is 135l/c/day. In current scenario, due to increase in population leads to occupy the rivers space. Now a days due to deteriorating natural water bodies, human depends upon sub surface water and ground water to meet their daily needs. In future these subsurface water source also become deteriorate due to over exploitation. In future it leads to subsurface and surface water scarcity so, many researchers finding alternate sources, sustainable water management techniques for proper monitoring the present sources to reduce water demand. There are 400 small and biglakes available in Hyderabad City. Out of which 169 lakes were notified by Hyderabad Metropolitan Development Authority (HMDA) for protection and conservation of water spread area. We have selected Nagole in Hyderabad City of Telangana state for conducting a study on assessing groundwater quality. Thirteen parameters were chosen for the analysis such as pH, EC, Total dissolved solids, Turbidity, Alkalinity, Chlorine, Sodium, Potassium, Total hardness, BOD, COD, Fluorine, Sulphate. Finally, results of the analysis were compared with water quality standards such as BIS 10500 (1991) of water sample. From this study, it was observed that EC exceeded the Permissible limit which impacts of more ion presence in the samples, alkalinity also higher than the permissible limit. The high content of alkalinity in water results in formation of chemical scale or precipitate which would clog piping or form a scale on filter, sodium exceeds the permissible limit. These parameters were higher in few sampling station while other parameters were within the permissible limits.*

Keywords: Deterioration, Scarcity, Management techniques

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