

## **Estimation of Groundwater Recharge in Thiruvallur District**

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### **ABSTRACT**

Groundwater resources is one of the most valuable natural resources. Due to the climatic changes, it is increasing the water demand for domestic, agricultural and industrial uses etc. Groundwater recharge is a fundamental component in the water balance of any natural resources which is a challenging task in worldwide. Precise evaluation of groundwater recharge is vital for its sustainable management and efficient use for various sectors of the economy. An overview of different groundwater recharge estimation techniques is presented in this study. The techniques covered in this study include mathematical approaches like Water Table Fluctuation method and Rainfall Infiltration Factor etc., The groundwater estimation committee norms are followed in this study to identify the recharge estimation through rainfall and field percolation. This tracer techniques are revealed extensively used in water-scarce areas like Thiruvallur district. This is especially important in arid and semiarid climate, with scarce in surface water and which economy is based on those resources. In this regard, the estimation of aquifer recharge is one of the aspects needed to quantify and manage the availability of groundwater resources. In this study, the WTF and RIF methods are used to improve the knowledge about groundwater resources and their quantification.

**Keywords:** *Aquifer recharge, Infiltration; Groundwater Recharge; Numerical model; Run-off,*