



EFFECT AND EVALUATION OF INDUSTRIAL WASTEWATER DISPOSAL FOR BASRAH PLANTS BY DIRECT INJECTION

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ABSTRACT

Wastewater effluent of plants is frequently disposed via injection wells or drain fields into the geological substrate near surface water streams. In this study, we evaluated and specified the relationships between the plants wastewater disposal flow, concentrations, and the disposal injection wells distances from surface water stream for minimum harmful pollutants transport to the stream. The study area was Basrah fertilizes plant near Shatt-Al-Basrah stream. A completed representation for the study area parameters data were done to simulate the aquifer, surface water, pollutants disposal, and flow-transport system for the current state and the proposed injection wells systems. The simulation and evaluation study showed that the current disposal system is harmful to the stream and the best disposal system for the wastewater plant was the injection wells. The study also revealed that the best distance for the proposed fertilizes plant disposal wells must be located not less than 480 m from the river with an injection rate not more than 3600 m³/day.

KEYWORDS: Injection Wells, Basrah fertilizes plant, Groundwater Pollution, MODFLOW