



Republic of Iraq  
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Water & Dams Branch



***Study in hydraulic profile for wastewater treatment plant (Al-Madain WWTP as a case study)***

***A thesis***

***Submitted to the Department of Building and Construction Engineering of the University of Technology in partial fulfillment of the requirements for the degree of B.Sc. in building and construction engineering.***

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**Abstract:**

It is very important that the design engineer shall take proper care in developing the hydraulic profile to overcome serious operational problems related to flooding under peak flow due to inadequate hydraulic gradient through the various units. Also it was found that it is very important to select the best hydraulic profile to achieve minimum cost of civil work, especially when the level of water table in the site of WWTP, because in such case there is a need to increase the weight of the units whose bases is below the water table to counteract the action of uplift force. in this project Al-Madain WWTP has chosen as a case study and it was found that if the base level of the aeration tanks coincide with the ground level, the cost of civil works will be at minimum.