

# ASSESSMENT OF IRRIGATION WATER MANAGEMENT IN NASRALLAH AREA, DAMANHOUR GOVERNORATE, EGYPT

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## ABSTRACT

Good irrigation management is a key sentence for solving the irrigation water problems in Egypt. Reduction of losses and increase the benefits of water by increase the efficiency and productivity is one of the most important goals of Ministry of Water Resources and Irrigation and its departments especially the National Water Research Center. Rehabilitation of irrigation structure is a must to reduce the losses and to give good facility for controlling the required quantities of water in the suitable time. Enhancement of the capacity buildings of the people in-charges in the water management such as manager, engineer, gates operators (Bahary) and farmers make them able to suggest and apply suitable plans for water management.

To assess the water situation in Nasrallah area, DamanhourGovernarate, egypt, a complete set of sensors and data recorders were installed to measure the water levels and discharges of Sabaia and Habib Canals. Operation time of the improved pump stations recorded using thermo-manager sensors. Operation time of the farmers pumps collected manually by technicians. All the improved and non-improved pumps were calibrated. The prevailing crop patters collected for the assigned mesqas and the two branch canals.

The main factors which lead to the water mismanagement in irrigation systemare; upstream farmers whom take more water than their needs causing water shortage for the farmers downstream. Engineers release water according to the quota per feddan regardless the crop patterns.Operators of canals or mesqaswhom open and close the gates according to his temper.Water leakage from hydraulic structures in irrigation Off periods and losses from canals. All of these problems cause uncertainty of water availability which push the farmers to over irrigate their lands whenever they find water regardless the crop requirements.

**KEY WORDS:** Water Management; Irrigation Improvement Project;Water Losses; Uncertainty; Egypt.

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