Abstract

Abdelaziz Farouk A. Mohamed

Water Management in Existing Residential Building in Egypt (Grey-Water System)

Throughout history much of the world has witnessed ever-greater demands for reliable, high-quality and inexpensive water supplies for domestic consumption, agriculture and industry. In recent decades there have also been increasing demands for hydrological regimes that support healthy and diverse ecosystems, provide for water-based recreational activities, reduce if not prevent floods and droughts, and in some cases, provide for the production of hy ower and ensure water levels adequate for ship navigation. Water managers are challenged to meet these multiple and often conflicting demands. At the same time, public stakeholder interest groups have shown an increasing desire to take part in the water resources development and management decision making process. Added to all these management challenges are the uncertainties of natural water supplies and demands due to changes in our climate, changes in people's standards of living, changes in watershed land uses and changes in technology. Egypt is approaching the point where water demands are exceeding supplies. This situation will necessitate improved decision making for water resources planning. Integrated management represents a unique approach, incorporating both temporal and spatial variations of the problem. To achieve an integrated procedure, efforts are being made to resolve numerous issues ranging from loss of agricultural lands to farmer involvement in the decision-making process. The first part of this paper describes the water resources and the water scarcity in Egypt. The second part describes the application of integrated management to water planning, water quality and the irrigation improvement program. Grey water is one of the promising solutions for reducing the water consumption in the residential sector and agriculture in Egypt. The paper case study applied the grey water system in the Wardan railway training centre throughout using the underground water in the staff housing unit for house and irrigation.