Identification of opportunities to improve efficiency by water consumption assessment

Sandra L. Dias\textsuperscript{a}, Helena Lucas\textsuperscript{a}, Maria do Céu Almeida\textsuperscript{b}, Helena Alegre\textsuperscript{b}, Marisa Vriato\textsuperscript{b}, Dália Loureiro\textsuperscript{b}

\textsuperscript{a}Águas do Algarve, S.A. Rua do Repouso, 10, 8000-302 Faro, Portugal
Tel. +351 289 990070; Fax: +351 289 99 079; email: s.dias@aguasdoalgarve.pt
\textsuperscript{b}Laboratório Nacional de Engenharia Civil, Av. Brasil, 101, 1799 Lisboa, Portugal
Received: 30 July 2007; Accepted: 14 September 2007

\textbf{ABSTRACT}

Characterization of water demand can be of great value for the management of water supply systems. Especially when water resources are limited, permanently or seasonally, the identification of the types of consumers and their characteristics is essential to identify opportunities to promote efficiency and demand management options. For each customer category, information to be obtained includes individual uses, typical daily usage patterns (average and dispersion), specific characteristics and magnitude. Knowledge and systematization of water uses also provide data to improve water balance and thus allow reducing uncertainty in estimation of losses. A study carried out in Algarve, a region where stress on water supply resources has been increasing, is presented aiming at better characterization of water consumption in the region to improve response both to normal and emergency situations.

\textbf{Keywords:} Demand management; Efficient use; Water consumption