

# The extent of on-site leakage in selected suburbs of Johannesburg

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## Abstract

This study investigated on-site leakage on 182 properties with relatively new municipal water meters in well-established suburbs of Johannesburg. A methodology was developed to estimate the on-site leakage rate from readings taken from these municipal water meters, which was then adjusted to account for metering errors. The results were analysed in 2 categories: 'Residential' properties, which consisted of single houses on individual stands, and 'Other' properties, which consisted of non-residential users and blocks of flats. A high incidence, 64%, of measurable on-site leakage was found. The average on-site leakage rates on 'Residential' and 'Other' properties were found to be 12 and 29 kℓ/month per property, respectively. In both cases, this represented 25% of measured consumption. Apparent losses due to on-site leakage were determined to be 10% of the on-site leakage, or 3% of total consumption.

**Keywords:** extent of on-site leakage, apparent losses, residential and non-residential, suburbs