



## Project Sheet

### Emfuleni Local Municipality Water Loss Project

**LOCATION:** Emfuleni Local Municipality situated about 50 km south of Johannesburg, Gauteng, South Africa.

**CLIENT:** Department of Water Affairs , Emfuleni Local Municipality

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**STATUS:** Complete **Duration:** February 2007 to June 2011.

**OBJECTIVE:** To reduce water losses and improve efficiency of water services through technical, social, institutional and financial interventions.

**CHALLENGE:** Approximately 25% of consumers in Emfuleni are metered and billed based on actual consumption with the remaining consumers being billed on a deemed consumption of 20kl/household/month. The non-revenue water in Emfuleni is estimated at about 50%. Emfuleni supplies approximately 200Ml/day to 226 000 households at an annual cost of R 300 million.

#### DESCRIPTION

The project comprised the following tasks:

##### Project management and Coordination.

**Technical interventions:** Implementation of network upgrades and resolution of intermittent supply, auditing and installation of non-domestic consumer meters, identification and removal of illegal connections, sectorisation and bulk metering, implementation of pressure management, active leakage control, logging of pressures and flows, system performance reporting, retrofitting of internal plumbing, installation of water efficient devices and review of the storage structure. The As-built drawings were updated.

**Institutional interventions:** Reviewed the establishment of the water use efficiency unit dedicated to championing water conservation and water demand management (WC/WDM) issues as well as the development of WC/WDM policy and bylaws.

**Financial interventions:** Developed the IWA water balance for the complete system, tariff review and review of metering and billing procedures to improve payment for services.

**Social interventions:** Appointed 50 local Water Services Assessors (WSA) to improve community awareness and education. These WSA's were trained in customer care management, basic plumbing, leak detection and informative billing.

#### COMMERCIAL CONSIDERATIONS

The project was funded by the municipality and the Department of Water Affairs at a total value of R18million (\$2.25 million) which forms part of the total water capital programme for the 3 years of R350million (US\$ 44million).

#### RESULTS

##### Benefits to the Municipality - Water, Wastewater and Energy Savings:

Various interventions have resulted in a total saving of 780 000 m<sup>3</sup>/annum. Resolving the intermittent supply in some areas has however increased the total supply to Sebokeng/Evaton.

The public image of the municipality has improved through improved service delivery.

Buried and malfunctioning infrastructure was located, cleaned and reinstated.

As-built drawings were updated.

Operations staff has an improved knowledge of the system operation and importance of maintenance.

Through training and transfer of technology the municipality can now troubleshoot, operate and maintain all their control valves and reticulation network.

##### Benefits to the Community:

Improved level of service to all customers through the elimination of intermittent supply and reticulation network upgrades.

Local contractors were appointed to undertake the construction works using labour intensive construction methods. In excess of 300 local jobs were created.

Unskilled local contractors were appointed to undertake the cleaning of infrastructure and to expedite intervention work.

Improved communication channels between the municipality and the community through the WSA's.

