Case Study

TECHNOLOG

Advanced Pressure Management

Sebokeng and Evaton, South Africa

- ✓ Leakage and burst reduction
- ✓ Rapid return in product investment
- ✓ Improved network efficiency
- ✓ Reduction in operating costs
- ✓ Easy to implement

Project Overview

This project area in the industrial heartland of South Africa comprised around 70,000 predominantly low income household connections supplying around 500,000 people. Low income and high unemployment levels resulted in general deterioration of internal plumbing fittings causing high levels of leakage, with approximately 80% of the water supplied to the area was wasted, a water bill of around $20m annually, which had to be paid by the utility and municipality.

A Technolog advanced pressure management system was installed to control the pressure of the incoming bulk water, allowing reduction of supplied water to Sebokeng and Evaton during off-peak periods, with a consequent reduction in leakage. The project was built using labour-based methods and a high level of stakeholder consultation ensured good support from the affected communities. Most significantly, the project was fully funded by a private development team with the cost being recovered out of a small percentage of the water savings over a period of five years.

Key Elements

- Measurement of night flows to determine leakage levels
- The need for the municipality to reduce its bulk water bill
- The need to reduce wastage of water
- The need to reduce inflow to the overextended sewerage treatment plant
- Advanced pressure management to reduce pressures during off-peak periods
- Private sector funding with a payment mechanism linked to saved bulk water costs

Key Outcomes

- **Withdrawals from bulk water sources reduced by 10,000,000m3/year**
- **Operating costs of approximately $0.15/m3 over the project's five-year period**
- **Ten year reprieve on the upgrading of water supply and sanitation infrastructure**
- **Improved status of municipality enabled access to additional funding for water management**
- **Using some of the savings, the municipality was able to improve the distribution network**

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