

# regional drought strategy

AN INITIATIVE OF SEOWATER AND THE COUNCILS OF SOUTH EAST QLD

SEPTEMBER 2005

## Pressure & Leakage Management

SEQWater, in partnership with state and local governments in South East Queensland, has developed a strategic plan to ensure the responsible management of our precious water resources now and for the future. This strategic plan is called the Regional Drought Strategy (RDS). The RDS is in the process of identifying and evaluating various contingency opportunities in response to the current drought conditions for a water sustainable future.

The aim of identifying contingency opportunities is to examine actions that can be taken to optimise the use of our existing supplies and to extend our supplies in the event that drought conditions continue. That is identifying options which have a significant effect on the supply/demand balance within the likely timeframes of the drought.

Pressure and leakage management is on the demand side of the supply/demand balance.

In South East Queensland an average of 13% of the water treated at our water treatment plants never makes it to consumers. This is called 'non-revenue water' or 'unaccounted for water'. Just some of the ways water can be lost include leakage from pipes and valves, meter error, use of water which is not metered eg hydrants and more. By Australian and international measures our systems perform well, but there is clearly opportunity to reduce losses from our system.

### CONTROLLING LEAKAGE

There is an opportunity to reduce the current level of water system leakage in South East Queensland, by local water authorities implementing pressure management and leakage detection programs.

These programs are targeted at reducing system pressures and leakage through use of 'intelligent' pressure reducing valves and flow meters. Leak detection investigations will identify opportunities for infrastructure rehabilitation.

The rate of leakage from the reticulation network is related closely to the pressure in the system. Higher pressures lead to higher leakage. In many areas, the pressure in the reticulation system is higher than it needs to be to provide appropriate levels of service to consumers. This occurs because of variations in the local terrain and the need to achieve sufficient flow in the system for fire-fighting purposes.

### MANAGING PRESSURE

Modern pressure management devices can be used to reduce the pressure in the reticulation network under normal circumstances and thereby reduce leakage. The devices are then able to increase the available pressure when flows increase, so that fire-fighting requirements can still be met.

Experience has shown that reducing the pressure of water in the pipelines causes little to no change of water pressure within the household, e.g. water pressure seems the same when hosing the garden or having a shower.

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## Pressure & Leakage Management

### WHAT IS BEING DONE ABOUT IT?

Pressure reduction and leakage management programs are currently implemented in several local government areas.

By gaining a better understanding of water flow through our networks targeted programs of leak detection, repairs and pressure reduction can be implemented, leading to significant reduction in water losses. Work has already commenced on these programs, with financial support from both the Queensland and Commonwealth Governments.

The Gold Coast has completed successful pilot trials and is now expanding its program with Commonwealth and State Government funding support. The programs are particularly cost effective delivering up to 5% total water savings at a lower cost than that achieved through most other demand reduction or supply enhancement options.

Other benefits include a reduction in the number of pipeline failures and breakages, minor reduction in household consumption and a reduction in power consumption and greenhouse gas emission.

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