

PRESSURE MANAGED ZONES WITHIN LARGER WATER SUPPLY SCHEMES



HMA successfully trial state of art motorised pressure reducing control pilot in utilities system

Location	Brisbane, QLD Australia
Industry	Water & Waste
Client	Queensland Urban Utilities (QUU)

PROBLEM

QUU utilise a flow/pressure modulation system management model whereby domestic and commercial water supply reticulation system pressure is increased with a respective increase in system flow demand and conversely pressure is decreased with a decrease in flow demand. This effectively negates pipe friction effects and delivers a relatively constant system pressure independent of flow demand.

An integral component in this is a reliable control valve along with a repeatable flow meter and pressure feedback device. Flow demand fluctuation can be vast, from very low night time flows to high daytime peaks with worst case added fire-fighting flow requirements and accordingly the control valve needs to be high ranging, sized and selected for each specific site. The entire network is divided up into numerous "zones" and water supply into the "zone" is controlled by two separate control valves (the second is for surety of

supply). Control is via a comprehensive SCADA system and emanates from a main control room for what now numbers around 160 metered zones within their distribution network.

Benefits of such a system of control includes minimising system leakage loss (the initial major factor when we were in drought times), minimising pipe bursts, protecting aging piping and prolonging infrastructure longevity due to lower pressure variance stresses.

TRIAL

HMA Flow & Industrial successfully completed a 12 month agreed trial period of Singer motorised pressure reducing control pilot at three different sites within the QUU network with a 100% score card. No failures occurred during the entire 12 month trial period and one of the three sites in particular gets much work they didn't pick easy sites for this trial.

RESULTS

In one QUU zone alone pipe burst frequency was diminished from around 55 per annum to just 6 per annum after pressure management system implementation. This represented a maintenance saving in excess of \$1 million pa for just this one zone alone (although the maintenance fitters may not like the diminished workload) so there is much benefit and relatively short pay back periods.

It was an excellent result for all concerned, QUU themselves, Singer and HMA. It will ensure QUU's on-going requirements, both spares and new sites, will be provided by this product.

If you have a new pressure management scheme and particularly if it is in the design stage we do have a great proven and tested solution and people with the knowledge that can talk the talk.