The Project

After attending the two “Water Quality and Distribution Seminars” staged by WIOA the key discussions seem to centre on the flushing and air scouring of the water mains that make up the distribution systems of our water authorities.

There seems to be a lot of conjecture as to the benefits of a regular flushing or air-scouring program and while some tend to move away from these types of works others are continually improving the quality of the infrastructure required to undertake such programs. These improvements are deemed necessary so as to maintain a quality of supply demanded not only by Regulators and Government but by ourselves as customers. During severe periods of drought we have seen some authorities trucking water to towns to guarantee supply, so flushing was the last thing on the minds of Operators at these times. If it was carried out water was returned to a tanker and recycled through the WTP as a way of augmenting the dwindling supply. The cost of this is borne by water authorities but eventually the customer will have to pay so we need to take a good look at the way we currently operate and perhaps change the mindset by asking.

- Do we need to continually flush and scour our mains?
- If yes, how can we better manage the water used?
- Is there a suitable alternative?
- Is it possible to capture and reuse the water and can we combine maintaining of other infrastructure such as stormwater drains and watering of parks and gardens?
- Can we possibly manage natural cleaning by flow reversal or velocity?
- Is age and construction material definitely a major contributor to the dirty water problem?
- Are our current standards and expectations too high?
- Do we sacrifice design because of cost?

Currently in the southern states we are experiencing our true daily demand as the winter months are upon us. In the summer we will see these figures almost double as our treated water is put onto gardens and lawns, but it is at this time of high turnover that we can manage the best chlorine residuals throughout the entire system for prolonged periods, so we could have an argument for the turnover of our water supply system. If this is the case, we need to look at a number of questions above.

I have an understanding of how authorities in Australia manage their systems but,

- How is it done in other countries?
- What is the age of the infrastructure?
- What are the standards required, who oversees them and how were they determined?
- Is water considered a declining commodity?
- How is water sourced, captured and stored?
- What value does the ordinary everyday user put on water?
- Are new systems being designed with water conservation in mind?

I hope to be able to gather information from a differing range of authorities in Australia and overseas on current practice and any alternatives they have come up with and put into practice.

Benefits

As I mentioned previously, we are in the grip of a major drought that experts have predicted will continue for possibly three to four years so some of our water supplies, lakes and wetlands may never again reach their overflow point. Population density continues to increase on the fringe of our major cities and towns and eventually, even with the strictest of conditions on usage, demand will overtake supply. As water users we can understand the problems associated with drought and water shortage but at some stage, we

will reach our daily minimum water use and just not be able to less. With water authorities starting to “forward plan”, predictions for up to fifty years are not uncommon and I am not certain a lot of discussion has taken place on this subject at this stage. I see it as positive step towards conserving our supplies along with continual improvement in design of housing and water using appliances. A lot of discussion has taken place on the price of water compared to other commodities but I feel that increasing the cost would only slow down the demand until we become used to it.

Saving our water and stretching our stocks seems to be the best alternative and the less we can waste the better off we will all be. I hope to be able to present the facts and offer alternatives in detail for Operators to drawn their own conclusions and implement any changes in their systems