LETTERS TO THE EDITOR

Editor's Letter
Bottled vs. tap debate rages on

The Water Wheel received both praise and criticism for its article on bottled water in the September/October 2006 issue.

One specific reader (who did not want her letter published) went so far as accusing the magazine and its publisher, the Water Research Commission of the "uncritical promotion of a commercial product, one which is hardly environmentally-friendly". The reader specifically mentioned the issues around the environmental impact of the sector.

While the debate over the merits and disadvantages of bottled water rages on internationally, the sector keeps on expanding in almost every country, even in South Africa, which has always been thought to have some of the highest-quality tap water. Even the country's largest tap water supplier, Rand Water, is now entering the bottled water market in a bid to tap into new markets and diversify its income streams.

The Water Wheel asked John Weaver, Chair of the South African Bottled Water Association) to respond to some of the criticisms against bottled water. He writes:

"The original 'highly controversial issue' around the bottled water industry was sparked off by a discussion paper titled *Bottled Water: Understanding a Social Phenomenon* by Catherine Ferrier of the University of Geneva (www.panda.org/livingwaters/pubs/bottled_waterpdf). From this reasonable, balanced article a number of points made by Ferrier have been taken and expanded upon to become various website and newspaper articles. Of these, the most prominent one did the e-mail rounds a year back (www.earth-policy.org/Updates/2006/Updates51.htm). The latter article picked out and expanded on just the two negative aspects of bottled water from the Ferrier article, namely that bottled water is up to 10 000 times more expensive than tap water, and the energy cost associated with making the containers and transporting the finished product. The rest of the Ferrier article was ignored.

There are various reasons why people consume bottled water, as noted in Ferrier's article. Taste is high on the list. Tap water with high chlorine levels, while being safe (bacteriologically) to drink, is not nearly as pleasant as bottled water.

In a bottled water tasting organised by *Men's Health* magazine 16 waters were presented to three tasters, including myself. These were presented blind and one stood out as having an off smell and taste, and we correctly identified it as tap water.

The next reason is for personal safety. Bad quality water has given rise to many quaint phrases in the English language, such as 'Delhi belly' and 'Gyppo guts'. The traveller who has paid lots of money for air tickets and accommodation should never drink tap water, even in supposedly safe countries. Risking a few days being sick in order to save the price of a bottle of water is a silly choice.

One of my brothers was in West Africa, and being confronted by a US$10 cost for bottled water in a five-star hotel, opted for tap water. The result: ten days down with 'rumble in the jungle'. In fact, bottled water is often advertised as a positive selling point for tourist destinations, even WWF's Eco-Safaris.

A third reason is that bottled water is a healthy alternative to other beverages such as sodas, drinks with high sugar levels and beverages containing artificial sweeteners or colouring. It is a calorie-free thirst quencher and now freely available in South Africa. Indeed, the huge rise in bottled water consumption over the last 20 years is closely linked to the way consumers face their nutrition, i.e. the current trends for healthier eating.

Lastly, it is the convenience factor. Cruising down the highway, or lying on the beach, having a bottle of water at hand is far more convenient than having to look for a tap. A sign of modern times is the bottle of water on the desk next to the computer. Our estimate is that more than half of those bottles will be tap water re-fills: Our view – great, so long as it is water and not sugary cooldrink.

Bottled water versus tap water: we have no argument with the tap water industry. These are two very different water markets, with a small overlap. It would be a wonderful world if the tap water industry could provide safe water to all, but the overwhelming reality is that the combination of inadequate personal primary health training, human behaviour and social customs will continue to result in human deaths, despite the best efforts of water engineers, social workers and water people. The bottled water industry does not pretend to be able to solve these enormous problems. In emergencies, bottled water can be called upon, e.g. the *Cryptosporidium* outbreak in Sydney, Australia, but it is not a long-term solution to the provision of safe drinking water.

An aspect of bottled water that was highlighted is the energy cost associated with making the containers and transporting the finished product. Packaging is one of the unfortunate aspects of modern life, and is not something for which the bottled water

industry should shoulder all the blame, and also cannot solve by itself. Yes, in South Africa we really do need plastic recycling policy and legislation that will apply to all plastic used in our daily lives, not just bottled water containers.

The energy cost of transportation also adds to our energy cost. The Ferrier articles notes that 75% of bottled water is consumed locally, and advocates that this should be increased. We have no argument with this. Indeed the sight of Italian bottled water on the shelves of some of our supermarket chains at prices lower than local water can be bottled for, is startling and a reflection of the craziness of export subsidies.

An important item in *the Water Wheel* article is that South Africa now has legislation governing bottled water. This legislation which has been approved by the Minister of Health will come into operation in July. The legislation covers both quality standards, and also the wording on the label so that the origin, and treatment applied, and mineral content must be clearly stated. This legislation is in line with the international standards of the Codex Alimentarius Commission.

My final image I present is one of an obese junk-foodie driving a fuel-guzzling suburban SUV sucking a can of sweet cooldrink, versus a gym-fit person driving a fuel-litre car with a bottle of water in the pop-out tray. It is all about choices."

Ancient knowledge forgotten

The twelfth century king of Sri Lanka, Parakramabahu I, officially decreed that not one drop of water should reach the sea without first serving humanity. And his regulations of how water should serve humanity (and humanity serve water) were far ahead of his time.

Many of his wewas have since been rendered inoperable by encroaching jungle. Why have we, in Southern Africa, who have followed western and scientific approaches to water usage have to deal with an encroaching jungle instead?

Ben Dekker, Port St Johns

Praise for the Water Wheel

It is high time to say a word of hallo to you all. I have been a subscriber of *the Water Wheel* for many years since you enrolled me in your *Water Wheel.*

I found your *Water Wheel* to be the most interesting and educative, and well managed. It is relevant in water technology and environmental aspects and very informative. It is also keeping up to date with the modern world and with the future vision of water co-ordination of both rural and urban centres, highlighting and creating awareness on waterborne diseases. Since I started receiving the journals I am meeting with points tip with stakeholder meeting with our small town in Kenya called Nanyuki. Keep up the good work. I would like to continue receiving your journal and conference invitations.

John Sikote, Water Technologist, Kenya

Bring back reservoir limnology

I have read with great interest the September 2006 issue of *Water Wheel* which contains an article on South African reservoirs and the message of expectation that an extinct science might be "*revived through a report*".

For someone who was trained in South African reservoir limnology, and who experienced the indignities of the "extinction" of reservoir science, it would be remiss to not pass comment on this article and the implications it conveys to the leaders of South Africa's water resource institutions.

The pool of South African reservoir expertise in the 1970s and 1980s was indeed internationally renowned, as were the institutions that housed the teams of scientists. Today, those scientists have moved on, either through a process of retirement, to other topics, or to greener pastures elsewhere in the world. It took more than two decades to attract and build up those teams, a process that was achieved through a network of stakeholder-based cooperative scientific programs with high-level governmental and institutional support. The decline began in the mid 1980s and was largely associated with the demise of eutrophication as a Department of Water Affairs priority issue, coupled to the quest for assessing ecological water requirements (Ecological Reserve).

With an arid landscape, reservoirs will always be the backbone of the country's water supply and therefore we need to ask the questions of how, and why, the leadership of our water resource and research institutions committed the cardinal sin of collectively, and progressively, allowing reservoir expertise to degenerate to the extinction level. Perhaps these questions will always remain largely unanswered, as the decision-making players of the day have passed on, and the topic does not merit a national commission of enquiry. I could offer a lengthy personal analysis which would cover themes such as politics, economics, institutional reorganisations, culture, personalities, the rise of the river scientists – all of which contributed. This however is another subject.

It was predicted many years ago that the focussed romance with river science would eventually play out, and at some stage South Africa would resuscitate its reservoir science base. Hopefully, the University of KwaZulu-Natal, my alma mater where I received my early training, has produced a report that leads to a revitalization of this science.

However, it will take more than a report to reconstruct the pool of expertise that has the necessary intellectual capacity to serve South Africa's reservoir science requirements. It will require the development of a similar type of stakeholder-based reservoir science program that was initiated more than 30 years ago. The support and leadership of the WRC is critical on this, as it should have been when the science was becoming extinct.

One final word of caution – beware of letting the pool of river science expertise follow the same extinction process – in what seems to be an eternal global cycle of casualties in expertise – as managers and institutions chase the next "flavour of the month".

Danny Walmsley (Former Coordinator of the CSIR Inland Water Ecosystems Program 1985-1990) Dartmouth, Nova Scotia, Canada

Bottled water article 'fascinating'

This is an appreciative note to congratulate you on your outstanding editorship of *the Water Wheel* and your significant personal contribution to its wide-ranging water-related articles.

You have raised the content and range of the reporting to a new plateau of excellence. Your article on bottled water in the issue of November/December 2006 is both timely and fascinating. Rand Water has recently joined the band wagon.

AH Charnaud, Howick