Re: Recycled water prices for SWC HWC GCC And WSC

Thank you for the opportunity to make a submission in relation to the Independent Regulatory and Pricing Tribunal's review into the above.

Status of this submission

This submission is made as a private citizen and I represent no organisation in making it.

My background is as a former member of staff of the Water Board and then of Sydney Water. I left in 1994.
I also headed a group promoting non-engineering solutions to "keeping the water in the pipe". PipeChecks was a proposal to track - on conveyance - the integrity of private sewer lines and thus prevent leakage of pollutants into groundwater.

My experience is only with Sydney Water Corporation. Should any of the comments below also relate to Hunter, Gosford and Wyong, and then it is a matter of inclusion by fortune, rather than by investigation.

General comments:

The Tribunal's discussion Paper serves to highlight the attitude of lack of action by all four water authorities towards water recycling. Sydney Water claims 2.8% per year (although 15,000 megalitres is equivalent to just one day's supply of water by the Corporation); Hunter 8.5% of dry weather flows each year; Gosford doesn't even give the percentage and Wyong again does not give the percentage.

In my view that is not only disappointing, but also an abrogation of responsibility.

That all the authorities claim they have plans in mind is encouraging. But the Tribunal's Paper does not give any time frame for their "commitment". It should be borne in mind that, apart from the Rouse Hill Development – which by the Tribunal's Paper is still being topped up by potable water; Sydney Water has developed no new initiatives in relation to water recycling in the past 15 years – only proposals.

It has, in fact, withdrawn from its most ambitious water recycling initiative – to take treated water from the Liverpool treatment plant and recycle it along a pipeline into industrial and sportsground usage in Fairfield and Parramatta.

General summary:

This summary is based on two commentaries -

1. we should separate recycling from interception or reuse, and
2. the supposition that we will not have the situation with water that we did with cable TV. We will not have a number of water miners or suppliers attempting to

establish duplicate systems of pipes in the same neighbourhoods as water authorities, with the consequential disastrous results.

I am no economist and I am unable to give any measured thought on modelling, as you request. However, I do believe there are a few issues the Tribunal should consider, not least of which are

1. encouraging recycling and reuse
2. discouraging intervention by water authorities that delays recycling initiatives
3. reducing Government policies which contradict reuse initiatives
4. Separating what can be priced and what cannot.

To my mind, there appears to be a distinction in relation to recycling, which is leading to confusion in the marketplace and reducing parallel encouragement of recycling and reuse.

I have separate definitions for the issues in the Tribunal's Paper.
Interception – e.g. catching water off the roof or drainage pipe

Stormwater reuse - catching water in detention basins and using it later

Local reuse – such as recycling of grey water on an individual basis

Sewage Farm reuse – recycling treated water from STPs

Sewer Mining – taking water from sewer pipes and using it locally.

Of these options:

Interception is covered by the BASIX requirements and adds to the value of residential properties. In addition, many residents have either voluntarily retrofitted rainwater tanks or have taken advantage of attractive grants to install the devices. Because the effect is immeasurable, there can be no usage charge. However, this should be further encouraged by the use of grants.

Stormwater reuse is negligible – but a potential source of water. Planning laws have required the construction of a large number of such basins in larger homes, but at the same time, never identified any reuse component. Individual detention basins have been required as part of planning laws since the mid-1990s.

In my view, at a residential level, some consideration should be given to introducing grants for the retrofitting of pumps – preferably low energy solar ones – to such private detention basins to encourage local garden use

However, I believe there is also potential on a large scale for the stormwater reuse option. There are unused dams in Sydney – Manly Dam, Lake Parramatta, Penrith Lakes and

Prospect Reservoir. All are areas where storm water is stored and can be (but is not currently) used as a recyclable for major development nearby.
In addition, Sydney Water deliberately excluded stormwater reuse option from the Northside Storage Tunnel, but it is still an option that can – and should be considered.

Local reuse will always be frowned on by health authorities, who would not wish to see the practice of widespread untreated water recycling take place in highly built up areas. This option should always remain a marginal one.

Sewage Farm reuse. Sydney Water has only done this in Rouse Hill.
It has abandoned a scheme to reuse treated effluent from the Liverpool treatment plant and divert it around Fairfield and Parramatta areas using a "willingness to pay" argument. (I discuss willingness to pay on Page 5)

Sewage Farm reuse is only attractive to industry, because once there is sufficient rain, there is no attraction for horticultural or landscape use. In a manufacturing plant, production goes on regardless of the weather.

However, Sydney Water has taken an intolerable amount of time to initiate this option. Proposals listed in the Tribunal's paper have been on the "drawing board" since the early 1990s and remained inactive. At the same time major development areas have been allowed to grow – and be developed by Sydney Water using potable water – and with no built-in incentives for recycling and reuse.

Sewer mining – as the Tribunal points out, there have been – and is now - companies interested in the proposal, but these have been strongly resisted by Sydney Water. In my view, the Tribunal should stimulate an aggressive regime to stimulate this activity, whether it be by pricing, write-downs of assets, local tax or building block incentives or grants.

My submission:

Is only about recycling and not stormwater reuse

I believe that the Tribunal should set parameters, rather than firm prices, for access to the sewer system.

I alluded earlier to the Telstra/Optus broadband rollout – and the Tribunal, I hope, would be anxious to avoid a price war in relation to recycled water. My view is that the community should aim to avoid the financial and environmental costs of a new dam – and not create a market.

The Tribunal, in my view, should rather seek to develop an environment in which both water authority and private sector coexist. The SOPA experience, as outlined in the Paper, appears to show that even if an organisation is committed to recycling, it receives

little or no official encouragement and only adds to the negatives in the "willingness to pay" stakes.

If water recycling is compared to demand management in the electricity industry – then there are no marketing incentives (even financial modelling) available to help potentially willing participants.

For many years Sydney Water has looked at sewer mining as a bulk supply issue. It has taken the view that the activity should take place on the larger diameter pipes – rather than it being an interception mechanism which can recycle part of the sewage before it reaches the sewer mains.

My submission to the Tribunal is that:

a. A water authority does not have any incentive to either provide or insist on the provision of recycled water to a development,
b. A water authority has the impression that the water is <u>its</u> property – by virtue of it being in the pipes.

Both attitudes should be changed.

As the Tribunal points out, Sydney Water levies four water charges on water to its customers:

1. a supply charge – from which takes its costs, plus a profit on bulk water from the Sydney Catchment Authority

2. a sewerage treatment charge – which is not a metered charge, but a fixed one for each property .

3. An "availability" charge, which offers an ongoing impost to property owners - whether or not the owner uses the service and regardless of when the service was laid and whether it has been amortised.

4. In addition, from my reading of the Tribunal's paper (3.1.2), the water agencies also levy their own charges on property developers for connection to the water main and the sewer without actually factoring the benefit of ongoing charges into future revenue.

So the question is:
If the water authority supplies water and charges the customer
Takes it away and charges the customer, and
Charges for availability of the pipes near to the customer
But provides no incentive for anyone else to reuse the water

Then why should it actually de-incentivise the interception of sewage and reuse?

With many building blocks in established suburbs being converted from few properties with large spaces (i.e. free standing) to many properties on small spaces (i.e. townhouses) – there may well be a case that the avoided pumping, augmentation and other transportation costs would be avoided at source – rather than simply in the transportation costs.

In my view, the water authority has a particular interest in how its system operated on a hydraulic and engineering manner. Instead the attitude appears to maintain a traditional approach and merely service the development using pipe-away methods, rather than by inventiveness and collaboration.

There are a large number of sewage package plants on the market that are very efficient and produce high quality effluent suitable for reuse locally.

The blockage to their introduction is from water authorities treating such schemes as "opposition" or "threats" rather than simply insuring their specificational integrity and factoring their impact into the operation of the network.

"Willingness to pay"

Sydney Water has hidden behind "willingness to pay" for many years as a reason for doing nothing in relation to recycling water. For example, my understanding is that water to the Wollongong steelworks is sources from the freshwater dams, rather than real attempts being made to source a large-scale use for recycled water and build the infrastructure (i.e. a pipeline from the Wollongong STP) to service that industry.

The pipeline may have a capital cost, but the benefits in terms of preserving fresh water for other uses would outweigh the expenditure, if a realistic goal were to conserve the environment and supply of water.

Obviously, in such a comfortable arrangement, there is no incentive for either Sydney Water or BHP to have any "willingness to pay". This is where the Tribunal should step in.

I note from the Tribunal's Paper that the Bluescope Steel proposal is one that Sydney Water is putting forward – but it is ten years too late – and one where the Corporation should have used the Tribunal to impose locally high prices to ensure the proper environmental result.

In every manufacturing situation, where there is no pricing, grant or taxation incentive then the high user industries will not use anything other than potable water in their processes.

Of course no business or property owner will volunteer to pay additional costs. They will volunteer to use a cheaper water source once it is made available, but everyone takes the view that why change until it is necessary.

Even on a residential basis, the experience of Rouse Hill is the same. Because there are no external potable water taps for that residents can "choose" from which source they water the gardens or flush the toilets, they use the recycled water. They have no choice and will never have a choice. That is not a bad thing insofar as supply is concerned, so long as it does not affect health.

The same principle should be for both old and new manufacturing developments and new residential subdivisions to be encouraged – through availability – to reuse water … and flow through to the water authorities.

My view on the how the Tribunal should approach this issue:

In my view the Tribunal should take a reverse attitude to the four water authorities and rather than set prices, use its economic determination to ensure that they encourage reuse.

The authority should request from the authorities a timetable for genuine reuse and recycling goals of **sewerage** only. I note the Paper lists only Hunter as having a set target (17 percent by 2007) – and I comment that this should be doubled.

This timetable should start no more than 18 months from the Tribunal's determination and take a "rolling" form of a target recycling within ten years and then by a formula of retaining that percentage to accommodate population and usage growth.

There should also be financial penalties for the authorities' not meeting their self-set goals. These should take the form of reduction in equivalent charges set by the Tribunal at a rate of say 70% of potable charges – again to produce sufficient financial incentives for encouraging recycling.

By the same token, the water authorities (and developers) should be able to gain "credits" as property developers install their own package recycling treatment plants on new subdivisions. They may even gain further credits if they extend such schemes to neighbouring properties.

As the Tribunal's paper establishes, there are marginal profits to be made in water recycling. The Tribunal's determination, in my view, should favour such initiatives and encourage recycling by developers – but not necessarily by the water authority.

Those penalties should then flow into encouraging schemes in redevelopment areas. That, of course, would have the effect particularly in high growth areas of encouraging a new Rouse Hill scheme.

One of the interesting effects of the Rouse Hill experience was that not all landholders in the original redevelopment area chose to participate. Many refused to contribute to the capital redevelopment, and then used (or tried to use their political connections to "opt back in".

Whilst the mechanism above is directed at discouraging water authorities form dragging their feet, similar debit penalties should be directed at landholders by way of reduced intensity planning consent etc who could install recycling works, but do not. There are plenty of recycling package plants which could be installed to treat and recycle water at small to medium scale, and those landholders could easily have imposts or incentives designed under guidelines for their developments

Finally, I think the Tribunal's has got it right in its 2003 ruling on Rouse Hill pricing. It is truly saddening that the scheme is still being topped up with potable water in spite of the huge redevelopment that has taken place in the area.

Thank you again for the opportunity to comment.

Chris Tweedie