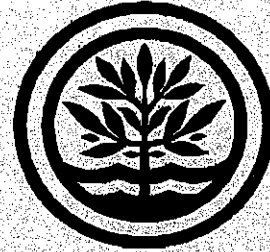


Pittwater Council

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Facsimile

To: Richard Warner

Company: IPART

Fax: (02) 9290 2061

Date: 7 April 2006

From: Paul Hardie

Re: Review of Recycled Water
Prices

CC:

Pages: 7

☐ Urgent

☐ For Review

☐ Please Comment

☐ Please Reply

Message:

Dear Richard,

Further to our discussion earlier in the week, please find attached a submission from Pittwater Council in regard to the pricing of recycled water in the Greater Metropolitan Area.

Council apologises for the lateness of the submission and any inconvenience this may have caused.

Kind regards,

Paul Hardie

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Review of Recycled Water Prices



PITTWATER COUNCIL

**SUBMISSION TO INDEPENDENT PRICING AND
REGULATORY TRIBUNAL OF NSW**

REVIEW OF RECYCLED WATER PRICES FOR

**SYDNEY WATER CORPORATION
HUNTER WATER CORPORATION
GOSFORD CITY COUNCIL and
WYONG SHIRE COUNCIL**

April 2006

Review of Recycled Water Prices

INTRODUCTION

On behalf of Pittwater Council, I submit for the consideration of the Independent Pricing and Regulatory Tribunal of NSW (IPART), the following submission in respect of the Tribunal's review of recycled water prices for the Greater Sydney Metropolitan Region.

For a number of years, Pittwater Council has sought to co-operatively develop with the Sydney Water Corporation a program that would recycle treated sewage effluent for the purposes of irrigating public landscaping and playing fields in the Pittwater local government area. Apart from the limited re-use of treated effluent on-site at the Warriewood Sewage Treatment Plant (STP), there is currently no use of recycled water within the entire catchment of the Warriewood Sewerage Network.

To date, Sydney Water has asserted that it is bound to recover the full cost of any proposed water recycling scheme from users of the scheme rather than from all of its customers. Pittwater Council understands the difficulties involved in fixing prices for recycled water that balances the need to sustain the reuse of the water resource with the equitable distribution of the costs associated with providing recycled water. For this reason, Council takes this opportunity to bring to the Tribunal's attention a number of issues that should also feature in the consideration and determination of the pricing of recycled water, particularly within the area of operation of the Sydney Water Corporation.

BACKGROUND

The Metropolitan Water Strategy developed by the NSW Government, has focussed on demand management, water conservation, optimising supplies from the existing system and augmenting existing supplies through desalination and more recently through the proposed exploitation of groundwater aquifers.

Although included as one of the water demand management programs, water recycling plays a very minor role in balancing supply and demand for water in Sydney. By its own figures, Sydney Water recycles less than 3% of the water supplied to the Sydney Metropolitan area. Given that the average daily demand (out of restriction times) of the Sydney Water customer base is 1,700 million litres per day¹, the vast majority of this water is therefore discharged to the ocean as treated sewage effluent after a single use only. With population growth and climate change taken into consideration, few cities in the world can currently afford such wasteful exploitation of a valuable resource from either an environmental or economic perspective.

SYDNEY WATER'S OPERATING LICENCE

The Operating Licence for Sydney Water Corporation sets a number of operational targets, the progress of which must be reported over the term of the licence. Sydney Water's Operating Licence requires the Corporation to reuse effluent for non-potable purposes. The Minister also has the power to set specific water recycling targets for the Corporation from time to time. Whilst specific demand management targets have been set, it is curious to note that no formal water recycling targets have been set for the period of the Corporation's current Operating Licence (2005-2010).

¹ Sydney Water, Water Conservation & Recycling Implementation Report 2004-2005

Review of Recycled Water Prices

This deficiency was brought to Sydney Water's attention in response to the Corporation's Environment Plan 2005-2010² as follows:

"Wastewater recycling initiatives being pursued by SWC are inadequate and highly fragmented. A structural investment in the water infrastructure of Sydney is required for large scale water reuse and to structurally reduce pressure on natural water systems. Given the changing climate and the increased severity and frequency of drought, recycling is a more appropriate mechanism for sustaining the resource whilst reducing pressure on our natural water systems. Therefore stronger recycling targets are required that should be included in the Environment Plan."

The lack of stringent water recycling targets in its operating licence has enabled Sydney Water Corporation to rely wholly on third party investment to meet the modest water recycling projections contained in its licence through private sector development of commercial and residential water recycling schemes. As a bonus, the resultant reduction in potable water use also assists Sydney Water in achieving the water demand management reduction targets that are stipulated in its operating licence.

SEWER MINING

In the absence of structural investment in large scale water recycling infrastructure by the water agencies (or agreement for a third party access regime) the only current opportunities for water recycling lies in sewer mining.

The high costs associated with retrofitting "3rd pipe" non-potable supply networks means that the majority of existing water customers will not have access to a reticulated recycled water system. Recycled water schemes will therefore be restricted to new residential developments and individual commercial and industrial applications. This trend is evident in the projects currently under development or supported by the Sydney Water Corporation.

Unfortunately such a disjointed approach to providing recycled water will severely curtail potential markets for the resource thus negating any benefits that could arise from economies of scale. This in turn will make it very difficult for regulators to define a common price for recycled water given the differing scales, efficiencies and project specific costs of the various water recycling schemes in operation.

Further problems could arise due to unintentional, perverse incentives associated with a common fixed price for recycled water relative to that charged for potable water. During periods of severe or extended drought for example when restrictions apply to the use of the potable supply, water users may well be prepared to pay more than the price of potable water for the surety of supply and use of recycled water. On the other hand a price fixed significantly lower than that for potable water may encourage profligate use of recycled water, the Rouse Hill residential development being a case in point.

The lack of investment by water agencies in the integrated management of potable water, sewage, stormwater and groundwater resources inevitably results in irrational use of water resources and a failure of market forces.³

² Sydney Water, Public Consultation Report on Sydney Water Corporation Environment Plan 2005-2010

³ Australian Academy of Technological Sciences and Engineering, Water Recycling in Australia – May 2004

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ENVIRONMENTAL CONSIDERATIONS

The provision of reticulated water and sewage services often involves hidden environmental and social costs to the community, e.g., ecological impacts, loss of environmental amenity or recreational opportunities. These externalities are generally not built into potable water, sewage treatment or recycled water prices.

Whilst sewer mining will certainly result in a range of avoided costs for the water agencies, perhaps the more important consideration should be the social and environmental costs that are currently overlooked.

Sydney Water Corporation continues to rely upon the fact that it operates its sewerage system in accordance with the licence requirements of the Department of Environment and Conservation to discharge its responsibility for environmental impacts. Environmental flow requirements are managed by the Department of Natural Resources and the Metropolitan Catchment Authority.⁴

Unfortunately, the "shared" responsibility for environmental protection across a number of State Government Agencies leaves nobody accountable. Impacts from Sydney Water's activities include ocean outfalls of partially treated sewage effluent, untreated sewage discharges and by-passes from its STP's, overflows and leakages from its sewerage networks, solid waste generation, greenhouse gas generation, noise and odour pollution as well as disruption of environmental flows in major river systems. All of these environmental impacts are accommodated in the Corporations Operating Licence and the Environmental Protection Licences issued by DEC.

No doubt, the cost of negative externalities are difficult to quantify, but they are certainly significant and should be reflected in the pricing of drinking water, sewage treatment and recycled water irrespective of whether the service is provided by the public or private sector. In this regard it is essential that the Tribunal should review water prices in the context of total water cycle management.

PRIVATE SECTOR COMPETITION

Both Sydney Water and the Department of Energy, Utilities and Sustainability expect private sector competition to drive and develop the water recycling market. As this expectation implies a significant private sector involvement in the development of water recycling schemes, there will also be significant private sector involvement in determining the price of the recycled water it produces.

It appears somewhat incongruous, therefore, that the State Government has chosen to regulate the price of recycled water for the public water agencies only. Not only does this action further diminish the responsibility of the water agencies to undertake total water cycle management, but it may also reduce the competitiveness of the public sector in providing recycled water to a larger customer base.

The responsibility for the ultimate management of water and waste water resources must remain within the public water agencies and recycled water should be priced or regulated in the same manner for both the public and private sectors.

⁴ Sydney Water, Sydney Water 2005-2010 Environment Plan, 2004.

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RECYCLED WATER INFRASTRUCTURE

The new infrastructure created for recycled water schemes (e.g., 3rd pipe networks, additional filtration plants, pumps and recycled water storage facilities) becomes the property of the proponent for the scheme rather than the water agency responsible for managing the scheme.

In the case of the playing fields irrigation project proposed at Warriewood, Pittwater Council will be obliged to meet the capital costs of the project as well as the ongoing costs associated with the management and maintenance of the project infrastructure. Council has no interest in becoming a water supply authority so any expansion of the water recycling scheme within the Warriewood sewerage network would necessitate the installation of separate infrastructure and the potential duplication of effort. Council and other customers may be more interested, however, in simply purchasing recycled water from a private sector supplier.

In the circumstances where a significant market demand has been established for recycled water (including across water agency catchments) a strong case could be made for the establishment of a third party access regime.

It is therefore important that the Tribunal also regulates recycled water pricing in situations where private sector service providers develop water supply schemes in direct competition with water agencies.

WATER FUNDS AND GRANTS

At present a number of State and Commonwealth funding programs are providing grants for projects that will conserve water, recycle water or improve the quality of both surface and groundwater. Due to the significant amounts of funding on offer, it is now possible for water recycling project proponents to rely on grants to cover the initial shortfall between users' willingness to pay and the actual costs of a project.

Where project budgets are marginal or a market for the recycled water produced has not been properly established, changes in demand, for example, due to an increased availability of potable water could render many recycling schemes unviable in the longer term.

Serious consideration should be given to mandating the wider use of recycled water instead of potable water for certain purposes if access to a recycled water supply is available.

CONCLUSION

Australia is a large and arid continent with only 12% of its rainfall run-off eventually flowing into rivers. Even this relatively small amount of harvestable water is concentrated mainly in tropical monsoon areas and is not readily available to centres of population or development. Water is an extremely valuable resource in Australia that will be subjected to ever increasing demand. Much greater scope exists to make better use of rainwater, stormwater and recycled water as additional water resources for water consumers.

There is currently a high degree of variability between the states and between the states and the commonwealth in regard to principal legislation controlling the production and use of recycled water, recycled water quality standards and water regulation economics.

Review of Recycled Water Prices

Whilst the review of recycled water pricing for the Sydney Metropolitan Area is an important step, a national approach to the costs and prices of potable water and recycled water as well as the processes involved in the utilisation of these resources, should be developed.

A whole-of-government approach should be fostered to resolve the conflicts of interest and avoid the agreements of convenience between government agencies responsible for environmental management, water resource management and water services delivery.

Further investment is required by water agencies in the development of appropriate technology, infrastructure, treatment processes and delivery mechanisms to ensure the efficient and cost effective use of all water resources and the integration of water conservation and water recycling management.

Finally, water pricing (for potable water, sewage treatment and recycled water) should be derived on the basis of total water cycle management as opposed to component pricing and must take into consideration the cost of all externalities, particularly negative environmental impacts.

Should you require further information or clarification of any issues raised in this submission please do not hesitate to contact me on telephone 9970 1105.

Yours faithfully

Mark Ferguson
GENERAL MANAGER