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Inquiry into Pricing of Recycled Water in WA  
Economic Regulation Authority  
PO Box 8469  
Perth Business Centre  
PERTH WA 6849

To Whom It May Concern

### **City of Mandurah Submission**

We refer to the invitation for submissions towards the *"Inquiry into Pricing of Recycled Water in Western Australia"*.

The City of Mandurah currently irrigates 120 sites, covering 170 hectares of landscaped area, utilising a combination of groundwater and Water Corporation mains. The number of irrigated sites in the City will continue to increase, as a result of current and future subdivision processes and the resultant population growth.

Council is committed to sourcing sustainable water supplies through the re-use of water.

Recycled water is currently used for irrigation from Gordon Road and Halls Head WWTP's via a recharge and extraction scheme, with a direct use scheme planned for Caddadup WWTP in the near future.

Throughout the submission, the City has highlighted the need to significantly improve the following:

- Consistency of the pricing of recycled water (from the Water Corporation)
- Identification of appropriate recycled water process options and subsequent approval process as relates to government departments.

We believe the Inquiry is timely and relevant and look forward to positive future actions and outcomes.

Please contact me on 9550 3612 if any further information is required.

Yours sincerely

Gordon MacMile  
**Manager Recreation Services and Centres**

enc City of Mandurah Submission

## **Inquiry into Pricing of Recycled Water in Western Australia**

### Submission from the City of Mandurah

#### **1. What other recycling projects are currently underway that the Authority should be aware of?**

##### Waste Water Process Options and Mandurah Water Balance Report

The City has engaged Kellogg Brown Root to complete the following work (Mandurah Waste Water Reuse Feasibility Study) focusing on:

- Waste Water Process Options
- Data Review and Water Balance Evaluation.
- Preliminary design and cost estimates of the major components of the system

The aim is to assess the viability of infiltrating effluent into the local aquifer and reusing to irrigate active and passive reserves as Managed Aquifer Recharge (MAR) against the alternative of treatment pond extraction for irrigation on active and passive reserves. The study includes the Gordon Road and Halls Head WWTP. The report also presents three options for extending the current waste water reuse scheme at the WWTP's.

The reports summarised below are currently in draft form.

##### Gordon Road WWTP

The City of Mandurah is currently extracting ground water from the superficial aquifer via a series of bores to reticulate 6 hectares of active reserves at Meadow Springs Regional Open Space – currently under construction. The Water Corporation has had a MAR system in place at Gordon Road WWTP for a number of years. The City of Mandurah currently has a waste water agreement in place with Water Corporation for annual supply of 110,000 kl for this purpose at a cost of 18c per kl.

##### Potential Future Requirements from Gordon Road WWTP / MAR system

Based on the condition and availability of groundwater supply, the following sites in the vicinity of the Gordon Road WWTP may require access to a waste water reuse scheme in the future - Meadow Springs Golf Course, Lakelands Town Centre (including residential development, future primary and high schools, community active reserves - approx 4 hectares, community parks and POS), Peel Education Campus Sporting facilities.

##### Potential Future Requirements from Halls Head WWTP

As reported in the *Issues Paper*, City of Mandurah has recently completed a trial using reclaimed waste water to irrigate three landscaped parks to the south of Halls Head WWTP. This has been successful and the City is now looking to expand the program to provide recycled water to a number of key facilities to reduce dependence on mains water and to better manage groundwater resources. Sustainable pricing for the water to offset increased infrastructure and management costs are central to these decisions.

Future requirements for waste water reuse will come from Halls Head Golf Course.

## Potential Future Requirements from Caddadup WWTP

The City is currently undertaking a feasibility study for the installation of a direct reuse scheme (membrane microfiltration system) at Caddadup WWTP to use treated waste water for the irrigation of 3 hectares of active reserve at Ocean Road, Dawesville. This includes two (joint use) school ovals and a Council active reserve.

It is further intended the water will also be used for irrigating parks and reserves along the Peel Inlet Foreshore in Dawesville, and a potential future high school oval and additional Council active reserve further south in Melros.

Potential private users of this waste water supply may be the Cut Golf Course, Dawesville.

### **2. *What other significant alternative sources are currently being used that the Authority should be aware of?***

The City of Mandurah estimates that around 30% of households have a domestic bore.

The City is currently conducting a trial Stormwater Catchment Scheme at Egret Point to harvest and store stormwater for reuse on parks. The water is captured via runoff from the road drainage system and stored in underground reservoirs on site with a volume of 100KL. The water will be used to irrigate approximately 200m<sup>2</sup> of reserve.

### **3. *What is the scope for additional water recycling in Western Australia?***

The City of Mandurah believes that scope exists for additional water recycling in the areas of stormwater catchment schemes, desalination – ground or ocean (ground water quality improvement) and residential water saving schemes including third pipe and similar.

### **4. *What other State and National water recycling initiatives should the Authority be aware of?***

The City of Mandurah acknowledges the state and national initiatives with regards to:

- policy framework and water recycling guidelines, particularly in regards to groundwater replenishment at Beenyup
- the review of Water Corporation charges for extending water infrastructure to new urban areas
- the review of pricing policies for recycled water and stormwater.

However in practical terms we believe there is a lack of 'on ground' support to implement recycling schemes highlighted in the following areas:

#### Lack of Funding for initiatives

The City recommends the State Government commits a high level of funding to support Local Government, business and industry to contribute to achieving the targets set by the State Water Plan 2007, in particular the State Water Recycling Strategy. We also urge the Federal government to recommit funds to the Australian Community Water Grants program.

## Barriers to Approval Processes

City officers have found that the approval processes and number of government departments involved in the approvals to use recycled waste water is prohibitive with regards to time, process, approval requirements, strategic alignment and inter / intradepartmental inconsistencies.

Very little assistance is provided to guide LGA's to assist with or expedite processes. This is discussed further at question 17.

### **5. *To what extent do service providers have market power in the provision of water recycling services?***

Within Western Australia a complete monopoly exists with the Water Corporation regulating and controlling access to waste water supply, continuity of supply and most importantly pricing.

While industry and business are able to calculate the dollar value of recycled water in terms of cost recovery on their product (eg Alcoa), LGA's do not have a return on their investment in monetary terms, as the water is used for the provision of community facilities and services including parks and active reserves essential to the health and wellbeing of the entire community.

### **6. *If providers of water recycling have market power, should their prices be regulated, and if so, how?***

The City of Mandurah strongly supports the regulation of water recycling, particularly in relation to access and pricing. Regulated pricing policy should be:

- Transparent
- No higher than cost recovery (see dot point below)
- Take into account environmental, community and social benefits (what the water is being used for, like community sporting facilities).

The City submits that regulated pricing should be based on any additional cost related to supply of water, not standard operating costs. For example Water Corporation has been infiltrating water into the aquifer at Gordon Road WWTP for years having no formal customers and users sinking bores to access the ground water outside of Water Corporation land.

In order to secure a long term supply the City of Mandurah opened up dialog with the Water Corporation. Although Water Corp operational costs have not changed or increased as a result of the City accessing the recharged waste water, Water Corporation is charging the City approximately \$20,000 per annum. This charge in essence is for the City to have guaranteed supply, with the accessing the recharged waste water / ground water mix via bores 500 metres from the site and not on Water Corporation land. In effect the City is paying for a guaranteed supply (however current clauses allow Water Corporation to change supply). This does not provide an incentive to use recycled water in any way, with the Water Corporation taking advantage of the supply / competition circumstances in an inconsistent manner across the state. The City of Mandurah is aware of a number of examples throughout the state where waste water is supplied for public and private sector usage, absolutely free of charge.

The City of Mandurah strongly submits that recycled water prices need to be set to allow LGA's the ability to conduct cost benefit analysis on projects so they can consider options (eg synthetic sports surfaces or groundwater irrigated POS) and plan for future use.

Any pricing policy should provide incentives to take up recycled water options that use water effectively and efficiently measured against community benefit. Some suggestions are to use a Reverse Sliding Scale, offer subsidies if you 'sign up' in the next 10 years or subsidies to reflect the community benefit (as opposed to private sector, profit generating usage). Policy should also encourage partnering between all levels of Government that increases the availability of infrastructure, the use of current and future technology and community capacity building.

## **7. *What is the nature and magnitude of any externalities associated with water recycling?***

The City identifies that the following externalities may be associated with water recycling:

- Indirect benefits – do not have to use ocean outfall pipes
- Social benefits – in areas where ground water supply is insufficient / low quality / high saline / over- subscribed or fully allocated, the use of recycled waste water would allow Local Government to build infrastructure in areas that otherwise couldn't sustain development.

Developers should also be required to consider short and long term water supply to these sensitive areas before they are given approval to develop the area.

The impact of not being able to secure a water supply in these areas is that residents will have poor or low ground water supply and will have to access scheme water. LGA's will not be able to provide the parks and active reserves demanded by the community.

The social benefits of sporting, recreation and park amenities have been well documented and have links with mental and physical well being, community social capital, and development of cohesive communities.

## **8. *If there are significant externalities, should water recycling prices be regulated to account for these, and if so, how?***

The City strongly advocates for the regulation of waste water and the recognition of externalities including but not limited to environmental benefits such as preservation of groundwater, response to climate change, benefits to the community such as provision of the urban landscape amenity, active and passive reserves for recreation, and related health benefits.

Additionally, any review should consider the extent of control over water infiltrated by Water Corporation (through a MAR process) into an aquifer, but accessed by another party some distance from the infiltration point (how far from infiltration point does water cease to become 'owned' or controlled by Water Corporation and therefore not subject to competition and pricing inconsistencies).

## **9. *What is the nature of any distributional or other social policy issues associated with the pricing of water recycling?***

The City submits that the purpose of water usage should be factored into pricing policy and structure (community based outcome vs private business).

Policy considerations should include the distinction between community and business use, purpose of water usage, externality benefits that LGA's provide – with tariffs / pricing to reflect these benefits.

Commercial users may be able to demonstrate an offset with regards to providing a benefit to community by way of investing in / contributing to infrastructure and / or water sensitive urban design.

**10. *If there are significant social issues, should water recycling prices be regulated to account for these, and if so, how?***

As previously submitted, pricing models should reflect the purpose of usage and social / community benefits

Provision may be considered for commercial organisations to receive lower tariff if they can demonstrate a contribution to the community. This would involve a reporting function. (eg Alcoa may contribute to ongoing irrigation or other costs involved in the installation or continued provision of an active reserve).

**11. *If recycled water prices are to be regulated, what are the principles that should apply?***

The City submits that the following considerations are critical:

- Long term sustainability for all stakeholders
- Community benefit – scope and nature of that benefit which may include commercial opportunities as well as benefits provided through LG services
- Identified mechanisms to provide long run planning and pricing for systems utilising waste water.

**12. *Should major industry be treated in a different way to other metropolitan commercial customers for the purpose of setting water usage charges, and if so, how?***

As is consistent throughout this response/submission from the City, we believe there is a strong case for valuing the services and outcomes provided by LGA's and not for profit agencies above commercial entities where a tangible benefit is provided to the whole community.

**13. *What role should recycling targets play in the adoption of recycled water?***

State targets need to be broken down into more meaningful and specific targets for regions. (eg Peel Region to use 30% recycled water by 2020). Regional targets would be more relevant and will ensure that communities (business and government) work together. Targets need to be continually reviewed to ensure continued take up of recycled water even if state targets are achieved.

The City of Mandurah may look to develop its own targets and implementation plan to achieve these. Recognition via funding and rebates should be provided to companies that develop their own Water Recycling Strategy, acknowledging that each area is location specific with regards to appropriate methods of reuse.

**14. *What role should rebates play in the adoption of recycled water?***

The first priority should be to introduce sustainable pricing that reflects identified outcomes and benefits.

The pricing structures (and the statutory process for permits) need to ensure the use of recycled water is a realistic option. To this end rebates should be secondary and as mentioned previously an option to businesses for contributing to a community benefit.

**15. *What role should the reservation of recycling targets play in the adoption of recycled water?***

A portion of available recycled water should be reserved for community public benefit eg 5 GI allowance out of a 12 GI capacity WWTP. The State should undertake forward planning taking population growth for specific areas into account. This would also link into regional Water Recycling Strategies.

**16. *What role should mandatory standards play in the adoption of recycled water?***

Mandatory standards would play an important role in regard to:

- Security / guarantee of supply
- Certainty of access to recycled water and sustainability of water
- Secondary sales market – potential on-sale / passing off needs to be regulated / controlled.

**17. *What view do interested parties have on access regimes as a means of facilitating the adoption of recycled water?***

Access to recycled water is currently difficult, complex, over complicated, with no clear processes and inadequate liaison between and within relevant state departments. There are at least 5 different government departments involved – DEC, DoH, DoW, EPA, Water Corporation.

These barriers and pricing inconsistencies do not encourage water recycling as an option. A 'One Stop Shop' advice and guidance process should be provided to ensure recycled water is the first or second option, rather than a last-resort as is currently the case.

There needs to be scope for free market forces but models need to be developed and advertised for further comment before being implemented.