

# ReWater

Water recycling in Australia

SUMMER 08/09

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# ReWater

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#### On the cover:

Adelaide parklands to benefit from high quality recycled water piped from Glenelg.



Work in progress on the recycled water pipeline

## Adelaide Parklands to benefit from high quality recycled water

**This \$75 million State and Federal Government funded project will provide more than 3.8 billion litres a year of high quality recycled water piped underground from Glenelg to the Adelaide Park Lands.**

The project is one of many that reinforce South Australia's standing as a national leader in water recycling.

By connecting to the existing Adelaide City Council irrigation network, this landmark project will provide a sustainable long-term solution for watering the city's iconic Park Lands. The project has the potential to be expanded to water conservation projects such as supplying recycled water for toilet flushing and commercial developments that do not require potable quality water.

South Australia already recycles 29% of our wastewater, compared with the 9% national average, and this project is one of many underway that will increase that percentage to 45%. The Glenelg to Adelaide project will contribute to a range of significant environmental benefits including:

- Reduced annual discharge of treated wastewater
- Reduced dependence on other water sources such as the River Murray
- Increasing the annual reuse of treated wastewater from the Glenelg Wastewater Treatment Plant (WWTP) by more than three times

- Improved health of the River Torrens and quality of the water in Torrens Lake through reduced demand and improved management

The project is being delivered by an alliance comprising SA Water, United Water, Lead Engineering and Construction, Leighton Services and Guidara O'Connor.

The main construction elements include:

- A new wastewater treatment facility at Glenelg Waste Water Treatment Plant (WWTP)
- Recycled water storage tanks and pump station onsite at Glenelg WWTP
- An eight kilometre, 750 millimetre underground pipeline from Glenelg to the Park Lands
- A 34 kilometre underground pipeline network around the entire Park Lands, incorporating North Adelaide and the CBD, with pipe diameters ranging from 50mm – 525mm

A best-practice Adaptive Management Framework will guide the sustainable and low-impact irrigation of the Park

*continued page 3*

## About ReWater

This newsletter, ReWater, has been designed to make information relevant to recycled/recycled water use in horticulture more accessible to horticulturalists (growers/farmers), the water industry and other interested people. It is part of the service provided by the Australian Coordinator for Recycled Water Use in Horticulture, funded by Horticulture Australia.

Back issues and instructions for subscribing to receive ReWater electronically quarterly can be accessed at [www.recycledwater.com.au/rewater](http://www.recycledwater.com.au/rewater)

### Your Feedback and Contributions

We would appreciate your feedback and suggestions for contributions. Please email [rewater@arris.com.au](mailto:rewater@arris.com.au) or contact us on 03 9421 1701.

[www.recycledwater.com.au](http://www.recycledwater.com.au)



The delivery of research and development outcomes from this project to the horticultural industry is made possible by the Commonwealth Government's 50% investment in all Horticulture Australia's research and development initiatives.

Know-how for Horticulture™

**DISCLAIMER:** Every attempt is made to ensure the accuracy of all statements and claims made in ReWater. However, due to the nature of the industry it is impossible for us to know your precise circumstances. Therefore we disclaim any responsibility for any action you take as a result of reading ReWater. issn1449-9800



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Lands with recycled water. Adelaide City Council will also develop comprehensive Irrigation Management and Monitoring Plans (IMMPs) for each park, garden and open space requiring regular watering. These IMMPs will take into account:

- Water application rates, to minimise the potential for runoff and water logging
- Current and future water table levels
- Soil structure and condition
- Soil and groundwater salinity

Construction began in September 2008 and work is underway at a number of locations along the pipeline route. All construction work is due to be completed, with water available for irrigation in the Park Lands, by mid-2010. •

**Source:** Daniel Thorpe, Stakeholder and Community Relations Manager, Glenelg to Adelaide Park Lands Recycled Water Project, CityGreen Alliance. For more information contact Daniel on: 08 8202 2817 Mobile: 0411 017 846 Email: [daniel.thorpe@gapreuse.com.au](mailto:daniel.thorpe@gapreuse.com.au)



Glenelg to Adelaide Park Lands Recycled Water Project

# 100 billion gallons of designer recycled water!

**West Basin Municipal Water District in California has just produced its 100 billionth gallon (378 Billion Litres) of recycled water!**

Since 1995, West Basin Municipal Water District (West Basin) has been recycling water from treated sewerage at its Edward C. Little Water Recycling Facility in El Segundo. The facility recycles water that would have gone into Santa Monica Bay and converts it into 5 different types of usable, "designer" water for its customers.

West Basin makes recycled water for both high and low pressure boiler feeds, cooling towers and irrigation. It also makes near-distilled quality water for injection into local seawater barriers, a series of injection wells along the coast to prevent ocean water from contaminating local groundwater supplies. The National Water Research Institute and U.S. Bureau of Reclamation have designated West Basin's recycling facility a National Center for Water Treatment Technologies, one of only six in the country.

**100 billion gallons weighs more than 8,500 Empire State Buildings (365,000 tons)**

"The 100 billionth gallon of recycled water is a great achievement and could not have come at a better time," said



Donald L. Dear, President of the West Basin Board of Directors. "We are in the middle of a 'perfect drought', a water crisis caused by environmental restrictions, record-dry weather and continued population growth. Every drop of water we recycle is a drop of drinking water for one's home or business."

West Basin produces 35 million gallons (1 US gallon is 3.87 Litres) of recycled water a day, and gets its highly treated wastewater from the Los Angeles Hyperion Wastewater Treatment Plant.

West Basin plans to recycle even more water in the future through the launch

of its Water Reliability 2020 Program, in which it will double its recycling and conservation programs, expand its education program and begin converting ocean water to drinking water, all by 2020. The plan will reduce our area's dependence on water imported from northern California and the Colorado River from today's 66% down to 33%, and improve local control and reliability of our future water supplies.

***The only plant in the world to produce 5 different types of recycled water from sewer water***

West Basin's water recycling plant is the only plant in the world to produce 5 different types of recycled water from sewer water. West Basin has a network of 70 miles of purple pipes to move recycled water throughout the South Bay and keep it separate from drinking water. West Basin also plans to expand its piping system to 130 miles to allow for the doubling of our water recycling program by 2020.

West Basin is currently working with more than 200 sites that use irrigation or recycled water. They include Chevron, Exxon Mobil, and BP refineries; Honda, Toyota, Goodyear and other businesses; cities, parks and golf courses. West Basin has received numerous awards for its water recycling program. •

**Source:** [www.westbasin.org](http://www.westbasin.org) 22/11/2008  
West Basin Municipal Water District  
Noelle Collins, 310-660-6217  
[noellec@westbasin.org](mailto:noellec@westbasin.org)





Drip irrigation benefits Baha'i Gardens in Israel

# Sustainable water sources study tour completed

The 'Sustainable water sources, innovations and applications study tour' was successfully completed in November; with 18 participants visiting almost 30 locations in three countries (UAE, Israel and Spain)

The study tour participants explored a wide variety of world leading technologies, management and applications in urban, industrial and rural contexts with a focus on identifying and understanding alternative water sources (including but not limited to recycled water) and ensuring they are fit for Australian amenity and production horticulture requirements.

The tour also explored and identified ideas and opportunities to overcome barriers to the adoption of alternative water source innovations; and consider broader sustainability aspects including the philosophy of reduce, reuse and recycling of water resources, energy requirements, raw material use, emissions and ecological impact.

*Some of the sites were quite impressive; and I have done a number of media interviews about the study tour here in Bendigo.*

In some ways these countries had similar water resource issues to Australia (i.e. severe water shortages) and in other ways were very different (i.e. mechanisms for decision making and the drivers that influenced water resource management options).

Participants stated that some of the highlights of the tour included:

- Speaking to and forming relationships with world leaders in water management and the development of supply strategies;
- Visiting the three largest desalination plants in the world;

- Learning about efficient, technologically innovative methods for recovering energy from the desalination process in a cost effective fashion;

- Developing contacts with irrigation companies that lead efficient water use methodologies in urban and rural industries across the world;

- Discovering innovative new technologies for treating, desalinating, delivering, irrigating and managing water supplies;

- Introduction to some of the most productive and salt tolerant plants currently being bred in the world, along with innovative methods for growing plants with salty water;

- Making excellent contacts with a range of experts from Australia (other tour participants) and internationally; and

- Gaining a broader understanding of water management practices and considerations outside of the participant's specific area of expertise.

Over 10 Giga bytes of photos, 200 gigabytes of digital video and 3 gigabytes of presentations were captured on tour. A full tour report will be publicly available in March 2009.

Stories from the tour will be reported in *ReWater* in coming editions and posted on the [www.recycledwater.com.au](http://www.recycledwater.com.au) website over the coming months.

For additional information about the tour and its outcomes contact Daryl Stevens •

**Source:** Dr Daryl Stevens; Principal Scientist, Arris Pty Ltd  
Phone: 03 9421 1701 Email: [dstevens@arris.com.au](mailto:dstevens@arris.com.au)  
[www.arris.com.au](http://www.arris.com.au)

## Study Tour sites visited

### United Arab Emirates

1. International Centre for Biosaline Agriculture (ICBA) - Research and Development Innovation in relation to the use of saline water for agriculture
2. Schlumberger Water Services - Water Source & Management - Aquifer Storage and Recovery
3. METITO - Innovation - Alternative solutions for SWTP sludge handling
4. MASDAR - Technology and Environmental Applications for Sustainable Cities
5. Acciona - Dinner Guest Speaker - Francois Dao - Creating an ecologically aware organisation - driving energy efficiency.
6. Fujairah Independent Water and Power Company (FI-WPP) - Hybrid Plant - Desalination and Power Generation

### Israel

1. Atlantium - Water Management Technology: UV disinfection
2. Mekorot Shafdan Reclamation Plant - Waste Water Treatment Plant
3. Mekorot Yarkon Springs Centre at Rosh Ha'ayin - Water Supply Management
4. Emek Hefer - Bio-Gas site - Technology - Alternative Energy Sources
5. Grand Water Research Institute (GWRI): Professor Rafi Semiat - Head (GWRI) @ Technion - Overview of challenges facing Israel and how they are being addressed
6. Bahai Gardens - Landscape irrigation
7. Mekorot Eshkol Site - Central Filtration Plant - Water Security - Quality and Monitoring Systems & Technology
8. Sapir Station Centre - Water Management - Pumping Station
9. Upper Galilee Region and Kibbutz Yiftach - Visit to water reservoir, agricultural water use in upper Galilee region and visit Netafim Orchard Training Centre
10. Arkal Filtration Ltd - Water filtration
11. Nahal Og Reservoir - Water storage; wastewater treatment and reuse on palm plantations
12. Dead Sea Hotel Wastewater Treatment Plant - Hotel Wastewater treatment and reuse
13. Dead Sea Works - Operating Salt Works
14. Netafim Kibbutz Hatzerim - Drip Irrigation Technology Training Centre, Netafim factory and Jojoba Plantations
15. Ashkelon Seawater Desalination and Purification Plant - Mekorot's desalination and rain augmentation technologies; integration of desalinated water into the National Water Carrier & Urban Amenity Irrigation
16. City of Ashkelon - Water savings through use of subsurface drip irrigation in urban setting

### Spain

1. FENACORE (Farmers Federation of Irrigators) - Irrigation technology, irrigation education and best practice - including visit to CoreNet Project (Digital Drip Irrigation System)
2. Two Desalination Plants using ERI Technology - Desalination - Visit to desalination plants (operating (Alicante) and in construction (Torrevieja))
3. Alicante Region - Wastewater treatment and urban irrigation
4. ATLL (Aigues TER LLOBREGAT - Water Authority for Barcelona) - Water supply and management issues in general

# Campus building used as model for water plan

**Researchers will use a hall at UC Berkeley to conduct trials of an on-site water recycling system.**

UC Berkeley researchers are currently using Wurster Hall as a model for the creation of a water recycling program that, if successfully developed, could one day be incorporated into many buildings on campus.

Presently in its beginning phases, the recycling system would sort recycled water sources, according to Vicki Elmer, campus lecturer of city and regional planning.

Separately treating the different types of water could reduce pollution, recapture nutrients and reduce potable water usage by up to 50 percent, she said.

The goal of the system, which developed from a graduate student class project in the College of Environmental Design last spring, is to sort and recycle water on-site, she said.



"They're using a similar system already in Europe, Japan and even at an apartment building in New York City," Elmer said.

Though research for the project is still in its initial phases, real-time monitoring of water usage in Wurster Hall may soon be possible.

Using sensors donated by a pumping company based in Denmark, 12 UC Berkeley graduate students working with Elmer have been monitoring water flow from a model sink.

The next step is to hook the sensors to a computer that can relay the information to the Internet for real-time viewing, Elmer said. She added that monitoring water usage is a first step to creating a water recycling system.

"Real-time (water flow) data from buildings has practical applications for conservation right now," she said. "This system can potentially be done within a year for

all the buildings on campus."

Many other conservation projects are also currently underway at Wurster Hall, according to Eli Perszyk, facilities manager of the campus's college of environmental design.

"We have a particular interest in sustainability projects in this building," Perszyk said. "There's a lot of support for them here."

Though other sustainability programs may be put into effect before the water system is developed, Elmer said she is very hopeful that her group will develop a concrete plan for the first stages of water recycling.

"It's a very different way of looking at waste water," she said. "We want to push the envelope to do the next step." ●

**Source:** Mai Fung 10/10/2008  
For more information see: [www.dailycal.org](http://www.dailycal.org)

# Thirsty sports endangered

**It could be the end of the sports world as we know it. Where cricket and football is played, sports that rely less on water may soon dominate, an academic will warn today.**

Deakin University's Pamm Kellett will also tell a summit in Fremantle that women's sports are more likely to miss out when fewer grass surfaces are available. It comes as Victorian authorities reveal the creative ways they have bypassed restrictions on watering sports grounds.

Dr Kellett said a national sports taskforce should be created as control of grassroots competition shifts from sports associations to water suppliers.

"It's the water corporations and councils that are deciding which sports get played, which sports get access to facilities and which don't," she said. "This creates equity issues in terms of access to sport, as it pits sport against sport and male sports against those played by women."

She said less popular sports with less influence would suffer in the short term.

"In Victoria, it's sports like the rugby codes that might be in danger of being

squeezed out, softball, and generally women's turf-based sports have lower participant numbers so those sports are also at risk."

But she said even financially powerful sports such as football and cricket could face extinction given their need for big, thirsty grass ovals.

"With many amateur levels being unable to take place, that has a huge impact on sport development. The less we are able to play sport, the less people build skills and the whole system is really in jeopardy. Sports that don't use water will flourish, while sports which are high water consumers may become extinct."

Many Melbourne sports fields are watered with recycled water that is not subject to restrictions. Cricket Australia confirmed it had joined with the AFL to invest in research to find suitable artificial playing surfaces to keep the game going at suburban level.



Councils have bypassed the rule that allows only a quarter of sports grounds to be watered by watering more ovals using the same volume of water. And water has been bought on the irrigation market for ovals in northern Victoria. ●

**Source:** The Age 29/11/2008  
[www.theage.com.au](http://www.theage.com.au)



# Greening Bendigo

The Bendigo region will use up to four billion litres of recycled water every year from the new Recycled Water Factory at Epsom.

The new factory marked the successful completion of the \$47 million Epsom-Spring Gully Water Recycling Project. The Victorian Government provided \$6.55 million towards the Epsom to Spring Gully Recycled Water Project and a further \$6.3 million came from the Commonwealth Government's Water Smart Australia Program.

The Recycled Water Factory will recycle all Bendigo's wastewater and is a key part of diversifying Bendigo's water sources and developing a secure supply. Coliban Water has offered Class A recycled water to 350 rural customers along its Ascot, Axe Creek and Cockatoo Hill channels.

Recycled water will also be used to sustain Rosalind Park, Queen Elizabeth Oval, Bendigo Tennis Courts, Tom Flood Sports Centre, White Hills Botanical Gardens,

Bendigo Golf Club, Bendigo Jockey Club and the Bendigo Harness Racing Club.

The Recycled Water Factory uses ultra-filtration and reverse osmosis to remove salt from Bendigo's disinfected wastewater and safely dispose of the brine waste. ●

**Source:** Dr Dharma Dharmabalan  
Executive Manager, Planning; Coliban Water  
[www.coliban.com.au](http://www.coliban.com.au)



Queen Elizabeth Oval Revitalised



Rosalind Park benefits from recycled water

## GOOD READS and website links

### Stormwater and Greywater: "Intallation Handbooks" Released

- Requirements for installation of rainwater and greywater systems in Australia - executive summary (57KB)
- Requirements for installation of rainwater and greywater systems in Australia (1.7MB)
- Master Plumbers Association Handbook on rainwater tank design and installation (2.54MB)
- Master Plumbers Association Handbook on greywater design and installation (2.45MB)

See Page 10 for more information

### Proceedings CDROM and Abstracts Handbook from AWA DE-SALTING 2008 Conference.

Keynote speakers were Tom Pankratz and Lisa Henthorne from International Desalination Association plus an excellent program updating progress across the nation.

Cost: \$85 inc. postage (within Australia). For more information or to order your copy please contact the AWA Bookshop.

Email: [bookshop@awa.asn.au](mailto:bookshop@awa.asn.au)  
[www.nwc.gov.au](http://www.nwc.gov.au)

### AWWA pocket sized field guides: For Water Operators and/or Wastewater Operators

Both guides are packed with useful facts, figures, formulae, calculations. AWA Member price of \$75 each plus p & h. For more information or to order your copy please contact the AWA Bookshop.  
Email: [bookshop@awa.asn.au](mailto:bookshop@awa.asn.au)

### Wastewater Quality Monitoring and Treatment

Editor: Olivier Thomas, Marie-Flo Pouet, Andre Van Der Beken, Philippe Quevauviller

Concentrates on on-line water monitoring methods for waste water treatment - not covered elsewhere and of increasing importance. Compares and contrasts on-line water monitoring methods with traditional manual (lab-based) methods. Aimed predominately at the European market - most publications available are written for American guidelines.

[www.booktopia.com.au](http://www.booktopia.com.au)

### WATER REUSE: An International Survey of current practice, issues and needs.

Edited by Jimenex and Asano.

Aims to show how differently wastewater reuse is conceived and practiced around the world as well as to present the varied needs and possibilities for reusing wastewater. Cost: \$199 plus p & h if AWA membership number is quoted. For more information or to order your copy please contact the AWA Bookshop.  
Email: [bookshop@awa.asn.au](mailto:bookshop@awa.asn.au)



### Reclaiming the Desert: Towards a Sustainable Environment in Arid Lands

Editor: A. M. O. Mohamed

Compiling contributions made by renowned contributors from across the world, including Japan, GCC countries, Canada, USA, Iran, Egypt, Algeria, Sudan, Pakistan, and India, Reclaiming the Desert: Towards a Sustainable Environment in Arid Lands presents the proceedings of an international symposium held in the United Arab Emirates in January 2006. The book addresses the latest advances in environmental and water resources technology and management in dry climates. It covers issues ranging from soil enhancement, wastewater and hazardous waste treatment, and sulphur utilization in agriculture and public works to groundwater protection, energy resources and sustainability, ecology, and global warming

[www.booktopia.com.au](http://www.booktopia.com.au)

### AWA Water Recycling Specialist Network - new website

The mission of the Water Recycling network is to maximise water recycling within Australia in a method that is efficient, socially acceptable and economically and environmentally sustainable, without causing adverse health impacts.

AWA Water Recycling Specialist Network  
[www.awa.asn.au](http://www.awa.asn.au)



# Old made new at advanced water park

The creators of Hervey Bay's zero-depth water park are literally turning old into new with a design that focuses on recycling and sustainability.

The park, being built by Wide Bay Water Corporation in the seaside Queensland city, will be constructed from recycled materials wherever possible. In addition, the renewable supply status of any material used will be carefully considered. No toxic materials or chemicals will be included. And plastics and plastic paints have been avoided where suitable alternatives are available. And of course all the water in the park will be recycled.

The park's architect Will Marcus, of Argo Projects, said: "One of the facility's key messages is the conservation of water so we don't want to tap into the local water supply to run the park. Instead, storm-water drains will be harvested to provide all the water necessary. And the water will be thoroughly cleaned with the best in purification technology."

Impact to the one-hectare foreshore site will be minimised with the use of raised platforms to prevent soil compaction and to allow the proliferation of native grasses. The platforms will also ensure scent trails are not interrupted for native animals.

The park will feature a circular play area the size of an Olympic swimming pool

(lined with soft-fall rubber recycled from car tyres and recycled glass beads) which will be studded with spouts and life-size whale sculptures. Seating will be positioned nearby and the whole area will be used for light and music shows. Even the park's 15m movie screen will be made from recycled water.

"We're taking these measures because every environmental decision we make helps to save the planet," said Mr Marcus. "This design is breaking new ground in establishing standards for sustainable, recreational facilities."

The park has attracted nearly \$5 million from the State Government as part of funding for lasting projects to celebrate Queensland's 150th birthday in June, 2009. ●



**Source:** Denis Heron, Water Reuse Manager, Wide Bay Water Corporation, phone 1300 808 888.

Wide Bay Water Corporation's water park site:  
[www.yourwater.com.au/waterpark](http://www.yourwater.com.au/waterpark)

Argo:  
[www.argo.com.au](http://www.argo.com.au)

Queensland Government Q150 celebrations:  
[www.q150.qld.gov.au/index.aspx](http://www.q150.qld.gov.au/index.aspx)



# 16 EVENTS diary dates

## Australia

### AWA Membranes and Desalination Specialty III Conference,

11-13 February 2009, Double Bay, Sydney

A 3 day conference highlighting new membrane technologies, water reclamation and desalination, membrane bioreactors, cost containment, energy use and impacts. Invited speakers include David Furukawa, Brian Bolto, Manh Hoang and experts from PUB, Singapore.

For more information see [www.awa.asn.au](http://www.awa.asn.au)

### The 4th Annual Water Symposium

20 February 2009, Darling Harbour, Sydney

Join Australia's most prominent water industry leaders and government policy shapers at this forward thinking forum to discuss how we are going to overcome our water challenges.

For more information see [www.legalwiseseminars.com.au](http://www.legalwiseseminars.com.au)

## ozwater'09

16 - 18 March 2009 • Melbourne

### OZWATER 09 – Australia's National Water Conference and Exhibition

16-18 March 2009, Melbourne Convention & Exhibition Centre

'From Challenges to Solutions' Ozwater 09 will address the wide ranging issues that face the water industry today. These include major national water reforms, climate change and its impacts, technological advances and the challenges of human resources to name a few.

For more information see [www.ozwater09.com.au](http://www.ozwater09.com.au)

## IRRIGATION AUSTRALIA

### Irrigation Efficiency Courses 2009

This course provides training for three units of competency from the Certificate III in Irrigation: RTE3605A – troubleshoot irrigation systems; RTE3607A – measure irrigation delivery system performance; and RTE3611A – operate pressurised irrigation systems. The course trains people who are involved in operating or managing landscape irrigation systems to evaluate their systems for efficiency, adjust irrigation schedules if necessary, conduct basic maintenance on equipment and know when to get expert help.

**Adelaide, Brisbane, Melbourne, Perth, Sydney:** 1 & 2 April 2009 and 8 & 9 September 2009

**Townsville:** To be advised in the New Year

Before enrolling make sure you read the Student Information.

Courses run on demand.

For information contact Catherine Parbery, IAL head office, phone 02 9476 0142, or visit [www.irrigation.org.au](http://www.irrigation.org.au)



### Integrated Water Supply Solutions – Desalinated, recycled, storm, ground and reservoir water

25 May - 5 June 2009

Melbourne, Perth, Darwin, Singapore, Brisbane, Gold Coast

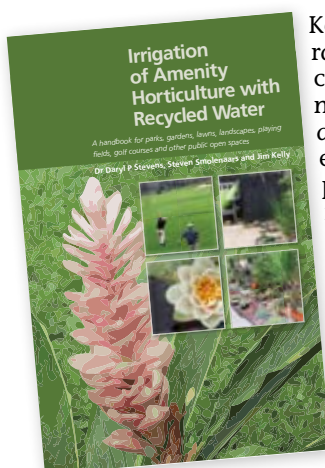
IWA commissioned this tour to look at all aspects of managing the integration of a variety of water sources from operations to administration; customer communication to technology; recruitment to risk management.

Expressions of interest must be received by 7th February 2009.

For more information see [www.recycledwater.com.au/studytours](http://www.recycledwater.com.au/studytours)

### FREE Amenity Horticulture Training Workshop

16 December, Carnegie, Victoria



Keen to incorporate water recycling into your next landscape and turf related horticulture project; but not sure how to get started? This half day workshop is suitable for all managers working in the amenity horticulture industry; all training participants will receive a free copy of a Guidance Handbook for Irrigation of Amenity Horticulture with Recycled water.

For more information see [www.recycledwater.com.au](http://www.recycledwater.com.au)



### 7th IWA World Congress on Water Reclamation and Reuse & AWA Reuse 09 Conference

21-25 September 2009, Brisbane, Queensland

Call for papers due April 09.

Conference program see [www.reuse09.org/](http://www.reuse09.org/)

## International



### The Water and Energy Exchange

28-29 January 2009, Marbella, Spain

An international exchange for senior stakeholders from the water & energy sectors to find sustainable solutions to key problems and opportunities through a unique conference and 1:1 meeting format.

For more information see [www.w-e-x.com](http://www.w-e-x.com)

the joint forces of csiro & scion

## ensis

### Recycling of Water 20th Anniversary New Zealand Land Treatment Collective Conference

25-27 March 2009, Taupo, New Zealand

This years conference focuses on recycled water and offers the opportunity for members and non members alike to meet and discuss research, engineering, legal, community and practical issues related to land treatment. It provides a unique and relaxed environment where researchers, consultants and government organisations can mix freely, share ideas, develop contacts and provide future directions for land treatment.

[www.ensisjv.com](http://www.ensisjv.com)

### 3rd African Regional Conference

11-17 October 2009, Abuja, Nigeria

Conference theme is The Role of Irrigation and Drainage in Food Security: towards attaining the millennium development goals in Africa.

For more information see [www.icid2009.org](http://www.icid2009.org)



# Tussle over recycled water

**A TUSSELE over recycled water is emerging between agriculture and housing in Melbourne's south-east, with State Government action required to meet booming demand.**

**A**gricultural businesses and residential estates are both keen users of recycled water from the eastern irrigation scheme, which treats sewage to create top-quality Class A water.

The operator of the scheme, Water Infrastructure Group (WIG), has upgraded the capacity of its ultrafiltration plant to meet demand. The plant processes Class C recycled sewage from Melbourne Water's nearby Carrum Downs treatment plant.

WIG, which is in partnership with Melbourne Water, has expanded capacity from 5000 megalitres a year to 5200 megalitres. The eastern irrigation scheme operates in the Cranbourne-Clyde area.

"The upgrade is designed to ensure 100% reliability. With any excess capacity, we have the capacity to supply new and existing developments," WIG director Peter Everist said.

Recycled water has become the life blood for many agricultural businesses in the region. One of WIG's 60 customers is Mansfields Propagation, a wholesale nursery at Skye between Frankston and Cranbourne. Daniel Mansfield, who operates the nursery with his father, said recycled water had enabled the business to expand by 50 per cent in the past few years.

The green gardens and golf course of the nearby Sandhurst housing estate also rely on recycled water. Paul Phillips, Sandhurst's director of land sales, said access to recycled water was a factor

in the strong sales of a new subdivision, Sandarra, last week, he said.

The State Government announced earlier this year that in the next 25 years, 40,000 houses would be on recycled water in Melbourne's south-east. But who will supply the water?

WIG, which is owned by US group Tyco International, has the right to operate the eastern irrigation scheme until 2029. WIG uses only 4 per cent of the Class C recycled water processed at the Carrum eastern treatment plant. The expansion of recycled water in the south-east is reliant on a planned \$300 million upgrade of the Carrum plant.

A spokesman for Water Minister Tim Holding said the business case for the upgrade should be completed soon. Potential uses included residential expansion, Latrobe Valley power stations and environmental flows for rivers, he said.

Mr Everist said the price of water, particularly with the desalination plant coming on stream, would go up. "This will make the price of recycled water more competitive," he said.

Water Infrastructure Group's Eastern Irrigation Scheme received the International Water Association's Project Innovation Award 2006 for Design Projects in Australia and South East Asia. Water Infrastructure Group will own and operate the scheme's ultrafiltration recycled water plant and pipeline network, and sell Class A recycled water direct to customers for 25 years.

Water Infrastructure Group is Australia's largest supplier of Class A recycled water for irrigation and residential dual pipe use.

The group combines the complementary expertise of the former Earth Tech water infrastructure group and Tyco's Water Technology Australia group to bring sole-source accountability and streamlined infrastructure delivery to the water industry.

Working with government and private sector clients in Australia and New Zealand, Water Infrastructure Group specialises in Design/Build, Design/Build/Operate and Design/Build/Finance/Operate projects for water and wastewater treatment, distribution, operations and infrastructure maintenance.

Water Infrastructure Group's portfolio of projects includes:

- Virginia Pipeline Scheme in Adelaide
- Campaspe Water Reclamation Scheme in Echuca
- Eastern Irrigation Scheme in Melbourne
- Mangawhai EcoCare Project in New Zealand
- Surbiton Park Recycled Water Plant in Melbourne
- Barwon Water Biosolids Management Project in Geelong
- Adelaide Desalination Pilot Plant
- Moura Wastewater Treatment Plant in Queensland

**Source:** Modified from The Age 24/11/2008  
<http://business.theage.com.au>







# Make the most of rainwater and greywater

The CEO of the National Water Commission, Mr Ken Matthews, recently released three 'how to guides' that will help Australian households boost their reuse of stormwater and greywater.

Launching the publications at the Green Plumbers Awards in Melbourne, Mr Matthews said "By providing much needed practical guidance on how to go about installing and maintaining rainwater tanks and greywater systems, these publications will encourage households to make the most of these valuable water sources."

The publications have been developed by the Master Plumber and Mechanical Services Association of Australia, with assistance of key stakeholders and regulatory authorities. They were funded by the National Water Commission under the Australian Government's Raising National Water Standards Program.

The first Waterlines publication gives householders the essential information they need when considering whether to install a greywater system. It covers rebates, approval processes, planning tools and installation issues.

Two additional specialist handbooks provide plumbers and householders with expert technical advice on how to install and maintain rainwater tanks and greywater systems.

Mr Matthews explained how encouraging the safe and reliable reuse of stormwater and greywater is helping people to use water more wisely.

"By increasing our use of rainwater and greywater in both domestic and commercial environments across Australia, we can improve water use efficiency and reduce pressures on drinking water supplies.

"It is appropriate that these guides are being launched today at the prestigious Green Plumber Awards, which recognise the industry's water and energy efficiency achievements.

"Like the work of the Green Plumbers, these publications will contribute to very

real water savings by informing consumers and encouraging plumbers to lead the way on innovative water reuse."

The Master Plumbers Association handbooks are available for download below:

[Requirements for installation of rainwater and greywater systems in Australia - executive summary \(57KB\)](#)

[Requirements for installation of rainwater and greywater systems in Australia \(1.7MB\)](#)

[Master Plumbers Association Handbook on rainwater tank design and installation \(2.54MB\)](#)

[Master Plumbers Association Handbook on greywater design and installation \(2.45MB\)](#)

**Source:** Australian Government National Water Commission  
10/11/2008  
[www.nwc.gov.au](http://www.nwc.gov.au)

## Purple taps for Trinity Park

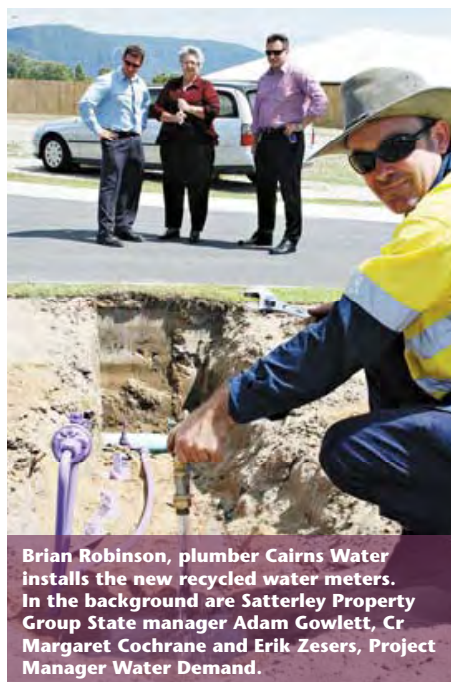
Large Scale Recycled Water Scheme for over 1000 Smithfield homes

After 18 months of planning, 1000 Smithfield Village homes at Trinity Park in Far North Queensland are expected to tap into their first large scale recycled water scheme.

The turn of the purple tap is expected to reduce potable water consumption by 130 million litres per annum. The option to use recycled water by the Village has been hailed as an important milestone and an innovative step taken by Acting Mayor Cr Margaret Cochrane to reduce demand on council water supplies.

"To be able to use recycled water within this community development saves around 100 million litres a year" Cr Margaret Cochrane said.

Building more dams to accommodate growth here would be the last thing most people would want to see happen. We needed to do something and recycled water is one way for us all to minimise our impact and ensure the way we live today can continue into the future.



Brian Robinson, plumber Cairns Water installs the new recycled water meters. In the background are Satterley Property Group State manager Adam Gowlett, Cr Margaret Cochrane and Erik Zesers, Project Manager Water Demand.

Satterley Property Group State Manager, Adam Gowlett, said it took the opportunity to install the recycled water system as soon as the council upgrade of the nearby treatment plant would enable the production of high quality recycled water.

"It is just like a normal garden tap or normal household tap you just have two water metres rather than one. One is painted purple indicating recycled water that will be connected to the outside garden taps and to the toilets in the house. This water used to toilet flushing has no odour and is probably better than the water you would drink overseas.

Adam Gowlett said the recycled water is very clean. "It does come from a waste water treatment plant so it has been through a full recycling treatment process."

**Source:** [www.cairnsnewspapers.com.au](http://www.cairnsnewspapers.com.au)



## National

### Australia's Lifeguards Get Water-Saving Grants

Surf life saving clubs in Australia are being offered grants of AUS\$10,000 to help them save water as well as lives. Australia's climate change minister launched the scheme as part of the country's \$250 million initiative to save rainwater and grey water. In total, \$12.9 billion has been set aside for the Water for the Future programme, designed to secure long-term water supplies for Australia. Michael Hornby, general manager at Surf Life Saving Australia, said the additional funding would help life saving clubs across the nation achieve their goal of becoming environmentally sustainable. An action plan will be developed for all clubs to help make them more energy and water efficient.

Source: David Masters, 10/10/2008  
www.fairhome.co.uk

### Desalination Technologies Role in Securing Australia's Water Supplies

The National Water Commission has released a report showing that Desalination technologies will play an increasingly important role in securing Australia's water supplies. "Emerging trends in desalination" aims to inform decisions on the merits of desalination technologies and their future place among water supply options.

Source: AWA Water E-News 3/11/2008  
www.nwc.gov.au

### Stormwater and Greywater: "How To Guides"

The National Water Commission (NWC) has released three "how to guides" aimed at helping Australian households boost their reuse of stormwater and greywater. The first guide entitled Requirements for installation of rainwater and greywater systems in Australia gives householders the essential information they need when considering whether to install a greywater system. It covers rebates, approval processes, planning tools and installation issues. The second and third guides provide plumbers and householders with expert technical advice on how to install and maintain rainwater tanks and greywater systems.

Source: NWC 10/11/2008  
www.nwc.gov.au

### Centres of Excellence

The Rudd Government is calling for proposals to establish two Centres of Excellence to build knowledge and technology to secure Australia's water supplies. The government will provide \$40 million to establish the Centre of Excellence in De-

salination in Perth, and the Centre of Excellence in Water Recycling in Brisbane. Source: AWA Water E-News 1/12/2008  
Minister for Climate Change & Water

### NWC Promote Recycling Option

In an Opinion piece published by ABC News, NWC chief executive officer Ken Matthews has reaffirmed the Commission's support for water recycling, including for drinking purposes, stating that it is "a viable option to 'supply harden' water supplies to Australian cities and towns". Mr Matthews states that, while the NWC recognises that there are risks associated with water recycling, they believe that "water safety risks can be safely and acceptably managed under Australia's stringent regulatory systems".

Source: ABC News 28/11/2008.  
www.nwc.gov.au



## South Australia

### Salisbury Stormwater Harvesting Project

Ms Wong has announced that the federal government is to provide \$6.5 million in funding towards a stormwater harvesting project at Salisbury that will reduce Adelaide's reliance on the River Murray. The Salisbury Stormwater Harvesting Project "will provide for stormwater to be cleansed in wetlands at Whites Road and Summers Road in Northern Adelaide before being injected into the aquifers below the Northern Adelaide Plains". Ms Wong advised that the project would capture and re-use up to 6.3 billion litres of stormwater per annum that is currently discharged to Gulf St Vincent. The project also aims to

replenish the aquifers below the Northern Adelaide Plains by providing an environmental contribution of 1.3 billion litres of cleansed stormwater each year.

Source: Federal Water Minister's media release (8 October 2008)  
SAI Global Water Newsfeed 14/10/2008

### Port Pirie Recycling Could Rescue Smelter

Federal Member for Grey, Rowan Ramsey, has predicted that the proposed water recycling facility at Port Pirie could assist the city's smelter operator Nyrstar, who are facing potential viability problems under the current form of the Carbon Pollution Reduction Scheme, reports ABC News. With the potential to reduce the region's use of River Murray water by 60%, Mr Ramsey reportedly claimed that the facility would ease pressures placed upon Nyrstar and keep the company in the region.

Source: ABC News 20/10/2008  
SAI Global Water Newsfeed 21/10

## Victoria

### "Class A" Plan to Fill Lake Weeroona

The Environment Protection Authority Victoria (EPA Vic) has announced that, in a state first, Lake Weeroona in the state's north-west is to be filled using Class A recycled water. "The plan means the Epsom Wastewater Treatment facility will produce Class A recycled water into the Epsom Spring Gully Pipeline for reuse on Bendigo public parks, gardens, sporting fields, industrial use and into the rural irrigation system".

Source: EPA Vic media release (21/8/2008)  
SAI Global Water Newsfeed 26/8/2008

### New Water Treatment Plant Opened

A new water treatment plant with a capacity of 6.7 million litres per day has been opened to replace the old, outdated plant, meeting the future needs of Alexandra and surrounding areas. Goulburn Valley Water Managing Director Peter Quinn said the dissolved air flotation filtration (DAFF) treated water to world's best water quality standards. (VIC Premier's Office)

Source: AWA Water E-News 22/9/2008



## Govt Rejects Plea to Relax Water Restrictions

The Victorian Government will not relax water restrictions for sporting grounds on Melbourne's fringe, despite appeals by several councils. Wyndham City Council, in Melbourne's west, has argued that growing outer suburbs should be given exemptions over established inner city areas.

Under current restrictions, councils can only water a quarter of their sporting grounds. The Water Minister, Tim Holding, says communities should rather look at alternatives such as drought tolerant grass, recycled water and synthetic playing surfaces.

"There are programs in place to support communities, to support sporting organisations and councils to make sure that they can access alternatives to watering in the traditional way," he said. "But we just can't go and pick and choose between different communities and say their need is more important than the needs of other communities."

Source: [www.abc.net.au](http://www.abc.net.au) 29/9/2008

## Water is Water - Purified Recycled Water

With the proof in the report revealed by Clean Ocean last month through F.O.I, the Victorian people are now questioning the credibility of the current Victorian water plan and why recycling has been pushed aside in favour of desalination. The demand for clean water around the world is increasing and with experts saying that the next world war could be over water, not oil, steps need to be taken to be sustainable and clever about our most precious resource.

Source: Clean Ocean Foundation  
Fact sheet on Purified Recycled Water



## Northern Sewerage Project Continues

Mr Holding today launched the final stage of the \$650 million Northern Sewerage Project which will provide additional sewer capacity for Melbourne's northern suburbs including Epping and Craigieburn. The project is being constructed in two stages and involves the construction of 12.5 kilometres of pipeline to connect the sewerage system near Merri Creek at Coburg, and the Moonee Ponds Creek in Pascoe Vale, to the North Western Sewer in Essendon.

Source: Water Minister's media release (2/10/2008)

SAI Global Water Newsfeed 7/10/2008

## Water Reclamation Scheme for the Murray River

Earth Tech, the managers of the water reclamation scheme at Echuca on the Murray River, north of Bendigo, Victoria, signed a 25 year agreement with Coliban Water to build a water reclamation plant, water storage facilities and pipelines to meet the local needs.

The early stages of scheme achieved complete water reclamation and eliminated wastewater discharge into the Murray River. It also achieved 100% biosolid re-use. The reclaimed water is rated class B and contains phosphorus and nitrogen nutrients which are beneficial to the agricultural environment and can reduce the need for fertilisers. Around five million litres are provided to local farmers every day.

Source: Fluid Handling 23/10/2008

[www.fluidhandling.com.au](http://www.fluidhandling.com.au)

## Farmers Go With the Flow

Coliban Water will extend its offer of supplying recycled water to 350 rural customers on the channel system north of Bendigo. The offer is part of a plan to ease the demand on drinking water in Bendigo. The arrangements mean eligible applicants will be able to receive 40 per cent of their entitlements on the Ascot, Axe Creek and Cockatoo Hill channels, gravity fed from Spring Gully Reservoir and the Epsom recycled water factory.

Goulburn-Murray Water has been unable to raise Loddon and Campaspe irrigator allocations above zero.

The Goulburn system fared slightly better, rising 3 per cent yesterday to a 12 per cent allocation, with expectations of a 22 per cent allocation by February meaning more than 5000 megalitres of permanent entitlements water would become available through the Superpipe.

Source: Bendigo Advertiser 16/10/2008  
[www.bendigoadvertiser.com.au](http://www.bendigoadvertiser.com.au)

## Ballarat Businesses Push for Recycled Water

A group of Ballarat businesses want authorities to consider adding recycled water to the city's drinking supply. The committee for Ballarat believes recycled water is the only way to secure Ballarat's drinking water supply in the long-term.

Committee water team chairman Tony Chew says Ballarat residents should start thinking about it. He says the city cannot rely on rain or piping water from northern Victoria.

"Just because we have the Superpipe delivering its 50 megalitres a day, that may not be the sustainable solution for the future, given the state of our rivers north of here in the Goulburn and the Murray," he said.

Source: ABC News 17/10/2008

[www.abc.net.au](http://www.abc.net.au)

## Epsom-Spring Gully Water Recycling Project Completed

The \$47 million Epsom-Spring Gully Water Recycling Project has been completed, supplying the city of Bendigo with an additional 4,000 ML. The recycled water will provide extra water for rural irrigation and for watering urban venues such as sporting venues and parks.

Source: AWA Water E-News 3/11/2008

Water Minister's media release

(31/10/2008)

Coliban Water

## Visitors Tap in to a Brave New World

Coliban Water kicked off water week by holding an open day at its Epsom Water Factory, where hundreds of people toured the \$47 million plant. The Advertiser asked one tour of about 25 people after learning about the processes, and the group overwhelming supported the idea.

Coliban's policy remains that the water is not for potable use, and maintains it can use 100 per cent of Bendigo's recycled water in a range of class A applications, thus saving equal amounts of potable water. The plant produces about 10 megalitres a day of class A recycled water and plays a key part in keeping major parks and gardens along the Epsom to Spring Gully pipeline green. It is also used in industry, and Coliban also offered another 1400 megalitres to up to 350 rural customers for a 40 per cent rural allocation on three gravity-fed channels north of Bendigo.

However, so far supply has exceeded demand, and there have been geographic limitations on accessing the water from the Spring Gully pipeline and the high cost of a designated third pipe system.

Source: Bendigo Advertiser 20/10/2008  
[www.bendigoadvertiser.com.au](http://www.bendigoadvertiser.com.au)



## Desalination to go Full Bore

The Glenkara Winery in the Pyrenees in central Victoria faces the last spin of the dice for survival through a new Australian invention that desalinates salty and brackish groundwater.

The "in situ" desalination technology operates in a borehole that reaches 35 metres below ground level and produces class A recycled water. The technology is owned and patented by a private Melbourne company, Desaln8. The ISD technology combines water treatment (reverse osmosis desalination) with hydrogeological knowledge. "Any number of small, modular ISD units can be installed close to the point of use to meet demand, provided there is a suitable aquifer," he said.

The inventor, Dr Barber, is confident the system has minimal environmental impact. No chemicals are added and the waste is pushed down to the lower depths of the aquifer. ISD had no buffer tanks, evaporation ponds, or disposal costs, he said, and the aquifers naturally recharged.

Source: The Age 26/11/2008  
<http://business.theage.com.au>

## Melbourne's a Recycling Champion

Figures released by Water Minister Tim Holding show that Melbourne uses more recycled water than any other major Australian city with 66.7 billion litres used in 2007/08. Mr Holding stated that a recent comparison conducted by the Water Services Association of Australia found that Melbourne recycled approximately three times more than any major city.

Source: SAI Global Water Newsfeed 18/11/2008  
 Water Minister's media release (13/11/2008)

## Calls to Harvest Stormwater

Environmental groups have submitted a proposal to a parliamentary committee inquiry into Melbourne's future water supply calling for more governmental focus on a proposal to harvest stormwater to secure the city's water supply, a stance that has been supported by the state opposition, reports ABC News. Lobby group Stormwater Victoria reportedly stated that over half of the city's rainfall runs into Port Phillip, and that capturing this resource was "more environmentally sustainable than desalination".

Source: SAI Global Water Newsfeed 28/10/2008  
 ABC News: Harvest storm water, committee told (27 October 2008)  
 ABC News: Opposition backs stormwater capture plan (27 October 2008)

## New South Wales

### Greener Greens

The Vintage golf resort at Pokolbin is the first customer of a new \$5 million recycled water transfer system. Hunter Water recently sought expressions of interest from local businesses to use recycled water for irrigation purposes. The Vintage is set to become the first business to benefit from the \$17.5 million upgrade of the Branxton wastewater treatment works taking advantage of the opportunity to use recycled water to keep their greens in championship condition.

The Vintage's decision meant 300 million litres of water a year could now be returned to the river. Branxton, East Branxton and Greta were undergoing significant growth and the water treatment system would need to deliver drinking water to an extra 7500 residents by 2030. "Upgrading the plant will not only help cater for this growth, it will improve effluent quality produced by the plant making it suitable to supply recycled water to surrounding businesses," said Member for Cessnock Kerry Hickey.

Source: Newcastle Herald 25/11/2008



### Water Grant Success for Club

A \$50,000 grant received by Wellington Race Club will be used to supply the track with recycled water. The funding is part of the Federal Government's Community Water Grant initiative. "The pump produces a minimum of one megalitre of recycled water a day and the track would only need 1.8 megalitres a week. It is 99.9 per cent pure water." Wellington Council is set to install 1.2 kilometres of pipes from the sewerage plant to the racetrack, to be finished by the end of the year. "Country clubs are doing these kinds of things as trials for the city ones. It will make the grounds look really attractive."

Source: Wellington Times 24/10/2008  
<http://wellington.yourguide.com.au>

## St Mary's Recycled Water Plant Under Construction

Construction is underway on an advanced recycled water plant at St Mary's in NSW that will produce up to 50 million litres of high-quality recycled water each day by 2010. The plant will boost the current volume of water in Sydney by 75 per cent, from 25 billion litres a year to over 40 billion litres a year.

Source: Sydney Water  
 AWA Water E-News 13/10/2008

## Recycled Water Contract Signed

AquaNet Sydney Pty Limited, part of the Jemena group, and Veolia Water Australia have announced that they have signed a contract with Sydney Water to build a \$100 million plant and pipeline scheme that will provide major industrial customers in western Sydney with recycled water. The scheme will initially provide 4.3 billion litres per year of recycled water to Sydney Water to supply industrial and commercial customers in Rosehill and Smithfield by early 2011.

Source: AquaNet Sydney  
 SAI Global Water Newsfeed 26/8/2008

## \$9.1 Million for Tamworth Recycling Project

The Department of Water and Energy (DWE) has announced that the state government is to provide \$9.1 million so that construction of a wastewater treatment and recycling project in Tamworth can begin. The funds will enable "Tamworth Regional Council to give the go ahead for two NSW-based companies, United Group Infrastructure and MWH Australia, working in alliance with Council, to start work on upgrading the existing Westdale Sewage Treatment Plant and constructing an effluent transfer and storage system to connect the plant to the farm, which will be developed near the airport on the outskirts of town".

DWE's media release (22 September 2008)  
 Source: SAI Global Water Newsfeed 23/9/2008

## \$875,000 for Kyogle Sewerage Improvements

The DWE has also announced that \$875,000 in state funding would be allocated for improvements to sewerage treatment works at Kyogle on the State's North Coast. "The work will involve the construction of a new treatment facility for septic tank pump outs, upgrading of existing sludge pumps and construction of a bio-solids recycling system and a wetland, complete with plants to help clean the water".

Source: SAI Global Water Newsfeed 23/9/2008  
 DWE's media release (22 September 2008)

## Australian Capital Territory

### Watchdog Flags Household Water Trading Scheme

The ACT pricing watchdog has suggested that trading water between households could be a possible option in a move towards a water market in Australia. The Independent Competition and Regulatory Commission (ICRC) says a move to a market-based system for valuing water offers benefits to the economy and consumers.

In its annual report, the ICRC concedes such a system is not achievable in the short term. But it says one option would be to allocate a minimum amount of water to each household and allow trading of water between them.

The ICRC has also endorsed exploring the idea of adding recycled waste water to the ACT's drinking water supplies. It concedes the proposal would be costly and controversial but says it needs to be considered as one option to ensure adequate water supply.

Source: ABC News 27/10/2008  
[www.abc.net.au](http://www.abc.net.au)



## Queensland

### QWC Confirm 40% Purified Recycled Water Trigger

Following a request from the state government to provide urgent advice on the trigger for the use of purified recycled water, the QWC has recommended that if purified recycled water was used as an emergency supply only, the trigger level for its introduction into Wivenhoe dam would be when combined SEQ dam levels (Wivenhoe, Somerset and North Pine) drop to 40%. In its report (26 November 2008) to the state government, the QWC advised that "misleading and false infor-

mation, which has been reported without foundation, has impacted community confidence in this new source of water in recent weeks. However, the Commission remains confident that purified recycled water continues to represent a safe and reliable source of supply which poses no additional risk to our drinking water".

Source: QWC; ABC News via SAI Global Water Newsfeed 2/12/2008  
QWC's media release (1 December 2008)

### Urban Drainage Manual Updated

The Department of Natural Resources and Water (NRW) have made available an updated Queensland Urban Drainage Manual (2007), which aims to assist developers and town planners to design urban stormwater systems. NRW infrastructure manager Rolf Rose stated that "the primary focus of the manual is to detail the hydrology and hydraulics of drainage systems to ensure Queensland local governments and storm water professionals have a standardised approach to the planning and design of urban storm water systems".

Source: NRW – via SAI Global Water Newsfeed 16/9/2008  
NRW's media release (11/9/2008)

### Providing Treated Water to Chemical Plant

Local Government Minister Warren Pitt has announced that the state government is to provide over \$1.9 million towards a recycled water project that will provide treated water to the Incitec Pivot chemical plant sourced from the Gibson Island Water Recycling Plant. "The project is designed to reduce the consumption of potable water at the Incitec Pivot plant by delivering 5.5 megalitres a day of demineralised water from Gibson Island via a pump station and pipeline", Mr Pitt said.

Source: Local Government Minister's media release 25/8/2008  
SAI Global Water Newsfeed 26/8/2008

### CSG Wastewater to Be Recycled

Infrastructure Minister Paul Lucas has announced that the Cabinet has endorsed plans to strengthen water disposal requirements from coal seam gas (CSG) production, which could "potentially help secure water supplies for communities in the Surat and Bowen basins". "In the Surat Basin alone coal seam gas (CSG) production for domestic purposes could produce an average of 25 gigalitres of water every year for the next 25 years, or about 3 times Toowoomba's annual consumption", said Mr Lucas. "The Bligh Government wants this water to become a valuable resource for environmental, agricultural,

industrial and, possibly, domestic benefit rather than being simply wasted as a by-product", he added.

Source: Infrastructure Minister's media release 30/10/2008  
SAI Global Water Newsfeed 7/11/2008



### Treated Sewage Gets OK From SEQ Farmers

FOOD growers in South-East Queensland's salad bowl in the Lockyer Valley say they have no qualms over using water recycled from treated sewage on their crops but the likely cost may be too high.

The State Government wants farmers in the district, near Gatton, to pay more than \$400 a megalitre to use water from the Western Corridor Recycled Water Project (eventually up to 25,000 megalitres a year will go to Lockyer farmers). They have agreements with the Queensland Government to take an amount of [recycled] water and the price will be calculated, but the actual price hasn't been agreed upon. Growcom chief advocate Mark Panitz said growers should not have to pay for treating recycled water to drinkable standard. "This where the negotiations are, whether growers can access to it at agricultural standards, not potable [drinking] standard." "If you have to get it at potable standard you are buying a Rolls Royce when all you need a Kingswood."

The Biological Farmers Association of Australia remain "wary and cautious" about recycled water.

Source: Brisbane Times 24/11/2008  
[www.brisbanetimes.com.au](http://www.brisbanetimes.com.au)



## Recycled Water Predominantly for Industrial Use

Of the 232-megalitre/day maximum output of the Western Corridor Recycled Water Project due for completion early next year, the majority will go to industrial users, with the Queensland Water Commission estimating that recycled water will satisfy 4-6 per cent of total urban demand in southeast Queensland.

Source: AWA Water E-News 17/11/2008

## Taste of Desalinated Water for SE Queenslanders

Everyone in south east Queensland will get a taste of desalinated water from the Tugun plant by the start of the new year. Water from the desalination plant at Tugun on the Gold Coast will be mixed with water supplies at treatment plants in the southeast corner. After salt water is sucked from the Pacific Ocean and purified at the \$1.1 billion plant, it will be pumped to a water treatment plant at Molendinar on the Gold Coast, where it will be mixed with water from the Hinze Dam.

From November 30 Gold Coast people will drink the desalinated water. GCD Alliance approvals and communications manager Alan Davie, believes many people will prefer desalinated water to dam water. "I've done a bit of a taste test in the community. They think it (desalinated water) is much smoother, much cleaner," Mr Davie said. "On completion, our grid will have the capacity to deliver an initial 340,000 megalitres of water per year.

Source: Courier Mail 19/10/2008  
www.news.com.au

## Australian Water Associations Defends the Quality of Water Recycled and Fit for the Purpose of Drinking in Australia.

The debate about the Queensland government decision to pump 60ML of purified recycled water into Wivenhoe Dam has been reignited, with commentators claiming that the technology is not infallible and carries risks. However, the Australian Water Association defends the quality of water supplied fit for the purpose of drinking in Australia.

Premier of Qld, Anna Bligh has put \$2.2 billion of projects on hold with her decisions to keep the recycled water tap turned off and delay the Traveston Dam. In a stunning about-face that will leave the South East Queensland Water Grid barely used, Ms Bligh yesterday announced the Government would no longer proceed with pouring recycled water into the southeast's dams regardless of how full they were. Instead, recycled water would only be used as an emergency option  
www.theaustralian.news.com.au

Ms Bligh also announced the Traveston Dam would be delayed by up to four years to ensure environmental mitigation works were completed before construction rather than after, as had been proposed. With public confidence in recycled water likely to be undermined, industry could be the only users of the pipeline, which cost \$1.7 billion more than a similar scheme proposed for Lockyer Valley farmers to ensure it was fit for drinking purposes.

Source: couriermail.com.au  
AWA Water E-News 3/11/2008

## Western Australia

### Recycled Water Pricing Inquiry

The ERA has released its Draft Report: Inquiry into Pricing of Recycled Water in Western Australia (4 November 2008) for public consultation. The report proposes that:

"the pricing of recycled water from large recycling plants that do not provide monopoly services to regulated customers is a commercial issue between the service provider and its customers and should not be regulated";

"where recycled water is provided through third pipe networks and customers have no alternative supply options, some regulatory oversight might be required to ensure that rates of return are not unreasonably high";

"all metropolitan commercial customers should be transitioned to cost-reflective water usage charges by 2010 (rather than 2014 as in the current policy)".

The report also provides a "set of draft principles to guide the owners of wastewater networks in pricing recycled water".

Submissions should be sent to the ERA by 12 December 2008.

Source: ERA via SAI Global Newsfeed 7/11/2008

Further information from the ERA

### Coral Bay Treatment Plant Operational

Water Minister Graham Jacobs has officially opened a new \$12 million water treatment plant in Coral Bay, stating that the facility "would provide a safe and reliable public drinking water supply that would help secure a viable future for the settlement and its world-renowned Ningaloo Marine Park". Mr Jacobs explained that the lack of suitable water and wastewater services had inhibited the growth of the Coral Bay settlement and that the new plant would allow the "world-class tourist destination" to grow

without compromising the surrounding environment.

Source: SAI Global Water Newsfeed 28/10/2008

Water Minister's media release (22 October 2008)

## International

### The Bank of America Tower at One Bryant Park New York



Groundbreaking began on the the Bank of America Tower at One Bryant Park on August 2, 2004, and Skyscraper.org reports, "Upon completion in 2008, The Bank of America Tower at One Bryant

Park will be the country's greenest high-rise building, demonstrating the state of the art in energy efficiency, indoor air quality, sustainable materials, and environmentally-conscious construction, operations, and maintenance procedures. Designed by Cook + Fox Architects, LLP, the 55-story, 2.2 million sq. ft. tower is the first to strive for the Platinum LEED designation..."

"The building will save 10.3 million gallons of water annually through such devices as waterless urinals and low-flow fixtures. A grey water system will capture, store, and re-use 100% of rainwater and recycle waste water and planted roofs, reducing the urban heat island effect. Bottom line, the Bank of America Tower will reduce energy consumption by 50%, potable water consumption by 50%, and create net zero carbon dioxide emissions." The Bank of America Tower at One Bryant Park is now expected to be completed in 2009, and was named "Best Green Project of 2008" by New York Construction magazine.

Source: www.greenroofs.com

### Landscape Salinity Management Guide

The Salinity Management Guide, a tool showing how recycled water can be safely used for landscape irrigation and that salinity can be addressed through proper management strategies, is now available. Salinity Management Guide website is maintained by the Southern California Salinity Coalition (SCSC) and National Water Research Institute (NWRI).

Source: AWA Water E-News 10/10/2008  
Salinity Management