

rewater

farming with recycled water



Farmers very happy with recycled water



Despite extreme weather conditions, farmers are very happy – and it's all thanks to recycled water.

For over a decade now, Victoria has had severe drought yet still maintains one of the highest per capita water usage rates in the world. By 2030, Victoria's population is expected to increase by one million people in Melbourne and 350,000 people in regional areas. At the same time, the CSIRO predicts that climate change is likely to make Victoria even hotter and drier.

The Victorian Government is encouraging the private sector to invest in infrastructure that will provide sustainable water solutions. Earth Tech, a Melbourne based water, environment and urban development consultancy, has taken up the challenge. Earth Tech, with investment worth \$100 million, already delivers more than 10 per cent of Australia's recycled water.

In addition to managing the Virginia Pipeline Scheme in South Australia, which distributes recycled water to more than 250 growers, Earth Tech operates the Eastern Irrigation Scheme in Melbourne in partnership with Melbourne Water.

The Age spoke to farmer, Mark Schreurs, a leek and lettuce farmer from Devon Meadows near Cranbourne, Victoria about his experience with recycled water from the eastern irrigation scheme.

Despite hot and dry conditions, Mark Schreurs still has a good crop on his 160-hectare property. He says he owes this to recycled water – without it, he 'would have been in all sorts of trouble'.

'We had planned to just tack it onto the end of rainfall, but now it has become mainstay,' Mark said.

See www.theage.com.au/news/business/recycled-water-starts-to-sink-in/2007/02/04/1170523960327.html for The Age article

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With reduced inflows into the dam, Mark had noticed increased salt levels in the water. Because recycled water has a low salt content and high nutrients, Mark said he now prefers to use the recycled water than water from the dam or bores.

Mark Schreurs business is just one of 60 customers of the eastern irrigation scheme, which annually supplies 5,000 million litres of Class A recycled water to horticultural, recreational and residential customers for non-potable use. Customers of the scheme can implement their business plans without worrying about restrictions affecting their supply of water. For growers, the reliable quality of the Class A recycled water means they consistently deliver high quality produce.

Earth Tech designed and built the ultrafiltration treatment plant – the largest in Australia – and a 60 kilometre pipeline network. Earth Tech will own and run the scheme, which began operating two years ago, for 25 years.

Earth Tech's projects, particularly in Victoria, are gaining industry and international recognition for innovation, sustainability and excellence.

Earth Tech's Eastern Irrigation Scheme set new quality and safety standards for water recycling technology in Australia and established national benchmarks for managing recycled water. Last year the scheme won the International Water Association's project innovation award.

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From the editor

ReWater has been developed in recognition of the growing interest in the use of recycled water in agriculture.

We would like ReWater to become a forum for you to communicate your thoughts about the beneficial use of recycled water.

If you would like to receive a copy of ReWater electronically, email us at rewater@recycledwater.com.au

If you have articles, ideas or would like to raise issues in the letters to the editor, submit them to the National Coordinator for Recycled Water Development in Horticulture.

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In 2005, Earth Tech was presented with the Urban Development Institute of Australia (Victoria) Excellence Award for Water Sensitive Urban Design for its work with the Sandhurst Club in Melbourne's south east. Earth Tech provides the 300-hectare resort with up to 600 million litres of Class A recycled water for its golf courses and residential development.

The eastern irrigation scheme also supplies recycled water to the Hunt Club residential estate in Cranbourne, who use it for garden watering and toilet flushing.

The first stage of Earth Tech's Campaspe Water Reclamation Scheme in Echuca – delivered in partnership with Coliban Water, was awarded the Engineers Australia (Vic) Award for Environment and Sustainability in October 2005 against 17 other competitors. Earth Tech established a recycled water market in the region by negotiating long-term contracts with local farmers to use Class B recycled water from the Echuca water reclamation plant for irrigation. Earth Tech now supplies the farmers with five million litres a day of high-quality Class B recycled water over the summer irrigation season. The recycled water contains phosphorus and nitrogen nutrients that provide further cost savings from reduced fertiliser use.



Firefighters using recycled water for firefighting operations

Jess Mochetti, Arris Pty Ltd

A health risk assessment conducted in Queensland has found that, with appropriate controls in place, recycled water can be safely used for firefighting purposes.

Due to drought and population increase, water conservation is a major issue in South-East Queensland. One solution to low water supplies is to use highly treated recycled water, Class A+, to supply non-drinking water needs via dual reticulation. Fire flows would be transferred from the drinking water pipe system to the recycled system, with recycled water the only water available for firefighting.

The Queensland Fire and Rescue Service (GFRS) and the United Firefighters Union (UFU) expressed concerns about the possible health risks to firefighters when using recycled water for firefighting, in particular risk of exposure to contaminants in recycled water through inhalation of aerosols, contact with skin, eyes or mucus membranes, and through wounds and burns, particularly the treatment of burns victims.

In response, the Queensland Department of Emergency Services convened a Steering Committee to investigate these concerns. Consulting firm GHD was commissioned by the Committee to carry out an independent health risk assessment, which looked at the water quality and management system at a recycled water treatment plant at Springfield, near Ipswich.

GHD concluded that, with appropriate controls in place, Class A+ recycled water is safe to use for firefighting.



GHD made recommendations regarding the management of treatment plants producing Class A+ recycled water and operation procedures for use of recycled water by firefighters.

To ensure the consistent production and safe management of Class A+ recycled water for firefighting use, it is recommended that all recycled water plant operations prepare and use a Recycled Water Management Plan (RWMP) that incorporates hazard analysis and critical control point (HACCP) principles.

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It is recommended the following operational procedures also be developed:

- » In dual reticulation areas during firefighting operations, firefighters will only drink bottled potable water.
- » When available, only potable water should be supplied to decontamination showers.
- » First aid drenching for burns and cleaning other wounds will be undertaken with potable water wherever reasonably possible. However, as the principal requirement is to cool the burn, if no potable water is available, Class A+ recycled water should be used. If recycled water is used, the burn should be washed later with drinking water and medical authorities advised that recycled water had been used in first aid.
- » Firefighters will shower with potable water upon return to the station following firefighting with recycled water.
- » Training and education procedures will be developed to brief operational firefighters using Class A+ recycled water.

Development applications for treatment plants supplying Class A+ recycled water for firefighting purposes in Queensland should be in compliance with the above recommendations and include mandatory validation, verification, water quality monitoring and audit procedures to ensure all controls are in place and working effectively.

Also, to ensure the recycled water provider is meeting their obligations as outlined in the RWMP, it is recommended that compliance with the RWMP should be independently verified through a third party audit.



In conjunction with these measures, the Queensland Government will maintain a watching brief over new research and technology development including improved methods for detection and removal of possible contaminants in Class A+ recycled water.

Information from:

- » Report summary from the Queensland Steering Committee considering the health risks to firefighters from using Class A+ recycled water for firefighting operations. Recycled water for operational use, QFRS Brisbane Region (web link not available at time of publication).



Australia

Climate figures push states to act on water recycling

Lawlex Water Newsfeed 4/1/2007
<http://abc.net.au/news/newsitems/200701/s1820433.htm>

The release of a national climate report from the Bureau of Meteorology has prompted the federal government to reiterate its call for state governments to treat water recycling as a priority. The parliamentary secretary for the environment, Greg Hunt, reportedly commented that although the report showed nationally there was above average rainfall, Sydney, Melbourne and Brisbane had recorded their third driest year on record and this has serious implications for the state governments. Greg Hunt said that national recycling schemes are a "priority for industry and agriculture".

Survey gives recycled water thumbs down

Lawlex Water Newsfeed 10/1/2007
www.theage.com.au/news/national/recycled-water-were-not-that-thirsty/2007/01/06/1167777325058.html?page=fullpage

A survey of 1,000 Australians' perceptions of recycled and desalinated water has revealed that 70% equate the recycling process with purified sewage and nearly half believe it contains human waste. The survey, conducted by Wollongong University, reportedly found that 30% thought recycled water was "disgusting" with only 11% agreeing that they would use it for drinking. Respondents overwhelmingly believed desalinated water was safer and more acceptable for drinking than recycled water. Greg Hunt, the federal parliamentary secretary for the environment and heritage, said Australia discharged about 1800 billion litres of waste into oceans each year. He said, while not ruling out recycled water for consumer use, the priority should be to reuse the waste water in industry and agriculture.

World-first domestic water recycling system

AWA Water News 7/1/2007
www.econova.com.au/

EcoNova, based on the Sunshine Coast, has achieved a world first in domestic water recycling technology. The patented water recycling system NovaClear has been certified for aboveground irrigation without requiring further disinfection and produces Class A+ recycled water (the highest quality of recycled water recognised by the Environmental Protection Agency) suitable for many household applications.

Pool industry takes the plunge

Lawlex Water Newsfeed 24/1/2007
www.theaustralian.news.com.au/story/0,20867,21095960-601,00.html

Tightening water restrictions across the nation have forced the struggling swimming pool industry to investigate the use of recycled water and groundwater

to stay in business. With current water restrictions in Victoria and the ACT banning the use of mains water to fill new pools, and the threat of similar restrictions being implemented in other states, Canberra pool supplier Marc Donoghue reportedly commented that "the radical step towards recycled water had been taken because the industry needed sustainable and cost-effective solutions that all suppliers could access".

Nominations open for World Environment Day Awards

AWA Water News 12/2/2007
www.unaavictoria.org.au/pages/awards-program/world-environment-day-awards.php

Nominations are open for the United Nations Association of Australia World Environment Day Awards 2007, which recognise businesses, local governments, community groups, environmental groups, individuals, schools and the media whose work serves to protect, manage or restore the environment. Categories include Excellence in Water Management. Nominations close Wednesday 9 May 2007.

South Australia

New minister for water security

Lawlex Water Newsfeed 7/2/2007
www.sawater.com.au/NR/rdonlyres/37F3221A-3E00-4017-806C-056930183EB3/0/watersecurity.pdf

Premier Mike Rann has announced the appointment of Karlene Maywald to the new portfolio of Minister for Water Security, adding to her current management of the River Murray. Mr Rann advised that Ms Maywald would work in collaboration with Minister for Environment and Conservation Gail Gago to manage the environmental aspects of the state's water resources.

Victoria

South East Water initiative to save precious water

[http://epanote2.epa.vic.gov.au/EPA/Publications.nsf/d85500a0d7f5f07b4a2565d1002268f3/64c2a15969d75e184a2569a00025de63/\\$FILE/464.2.pdf](http://epanote2.epa.vic.gov.au/EPA/Publications.nsf/d85500a0d7f5f07b4a2565d1002268f3/64c2a15969d75e184a2569a00025de63/$FILE/464.2.pdf)

EPA Victoria has approved South East Water's management framework to supply recycled water to commercial customers for drought relief purposes. The new framework enables supply of recycled water to commercial users for suitable applications such as irrigating parks and sports grounds and dust suppression in road construction. South East Water Managing Director, Mr Dennis Cavagna, said their goal is "to make alternative water supplies available so Melbournians can continue to enjoy recreational pursuits and satisfy their water needs over the summer months. We are providing access to Class C recycled

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water for customers wishing to tanker recycled water for drought relief and will continue to explore other alternative water sources."

Sewage disposal monopoly under fire

www.theage.com.au/news/national/push-to-end-state-sewage-monopoly/2007/01/04/1167777218407.html

Federal environment parliamentary secretary, Greg Hunt, has called for the Victorian Government to end Melbourne Water's monopoly over sewage disposal and allow a private firm to recycle the effluent the state-owned utility currently pumps out to sea. Reportedly, Mr Hunt stated that private firms that wished to recycle the sewage for industrial or agricultural use should be free to do so, "rather than Melbourne Water retaining the exclusive right to simply dispose of sewage off our coast". In response, a spokesperson for Water Minister John Thwaites reportedly commented "the Victorian Government did not support the privatisation of water".

Recycled water for 40,000 homes

www.theaustralian.news.com.au/story/0,20867,21062274-1702,00.html

www.theage.com.au/news/National/Recycled-water-for-40000-Vic-houses/2007/01/15/1168709656925.html

www.southeastwater.com.au/sew/index.asp?link_id=1.1636

More than 40,000 new houses in Melbourne's outer south-east will be connected to Victoria's first mandatory water recycling scheme, state Water Minister John Thwaites has announced. The move, which affects new houses to be constructed in a housing estate between Cranbourne and Officer over the next 25 years, is estimated to save up to 4 billion litres of drinking water a year. New developments will be required to install dual pipe systems, in which drinking water is replaced with Class A recycled water to be used for toilets, gardens and washing cars. Mr Thwaites said each home connected to the dual pipe scheme would use about one third less drinking water. South East Water Managing Director, Dennis Cavagna said purple taps, pipes, hoses and meters would help residents to identify recycled water and information sessions would educate residents about how to use recycled water safely. The recycled water will come from the Eastern Irrigation Scheme, which already provides 115 homes in Cranbourne's Hunt Club development precinct with recycled water.

New South Wales

Poll says "recycled water acceptable for drinking"

www.smh.com.au/news/national/well-drink-recycled-sewage/2007/02/11/1171128816473.html

Seventy-eight per cent of Australians say they'd drink recycled water, according to the Herald/ACNielsen poll taken at the weekend, contradicting state governments' insistence that people find the idea distasteful.

80% say 'yes'/20% (Premier included) say 'no'

Lawlex Water Newsfeed 15/2/2007

www.theage.com.au/news/National/lemma-rules-out-recycled-sewage-water/2007/02/12/1171128855495.html

NSW Premier Morris lemma has restated his commitment not to introduce recycled water into the state's drinking supply, despite a new opinion poll which suggests 80% of people in the state are comfortable with the idea.

Tasmania

Taskforce ready to combat water and sewerage infrastructure issues

AWA Water News 12/2/2007

[www.treasury.tas.gov.au/domino/df/df.nsf/LookupFiles/Water-Sewerage-DP.pdf/\\$file/Water-Sewerage-DP.pdf](http://www.treasury.tas.gov.au/domino/df/df.nsf/LookupFiles/Water-Sewerage-DP.pdf/$file/Water-Sewerage-DP.pdf)

The Tasmanian Government has announced the creation of a Ministerial Water and Sewerage Taskforce, the objective of which is to identify ways of achieving major long-term improvements in Tasmania's water and sewerage services and infrastructure, through a collaborative approach with local Government.



Queensland

Interest sought on recycled water use

www.cairns.qld.gov.au/files/news/recycled_water_press_release.pdf
www.cairnswater.qld.gov.au/pdf/Cairnsbrochurerecycledwaterfinal.pdf
www.cairnswater.qld.gov.au/pdf/CairnsRecycledWaterResponseForm.pdf

Cairns Water is calling for comments from potential customers who would like to use recycled water for non-drinking purposes. An information pack and questionnaire form has been made available for interested parties at the above websites.

Sarina to get water pipeline from Mackay

AWA Water News 7/1/2007
<http://statements.cabinet.qld.gov.au/MMS/StatementDisplaySingle.aspx?id=49730>

Sarina Shire Council will receive \$3 million as an interest free loan from the Queensland Government, in addition to the \$3 million already committed in November 2006, to build a 19km water pipeline from the Mackay Water Treatment Plant to the town of Sarina. The Council will then buy the treated water from Mackay Council to supply residents.

Two-year countdown to recycled water

www.goldcoastwater.com.au/t_gcw.asp?PID=5888
www.goldcoastwater.com.au/t_news_item.aspx?pid=6611

The 'purple pipes' at Pimpama Commera will be flowing with Class A+ recycled water for toilet flushing and outdoor use by December 2008, the Gold Coast Council has announced. Construction for 'Package D' – the final infrastructure package for the Pimpama Commera Master Plan – is due to start early this year. Under the plan, all new homes in Pimpama Commera will be fitted with a dual reticulation piping system which will provide Class A+ recycled water for toilet flushing. Rainwater tanks will also provide water for cold washing machine taps. Water Sustainability Committee Chair, Councillor Daphne McDonald said these initiatives "will combine to reduce the use of drinking water in the region by up to 84 per cent". 'Package D' includes:

- » Design and construction of recycled water network mains
- » Construction of additional wastewater and drinking water mains to cater for the growing population
- » Building drinking and recycled water reservoirs to ensure supply
- » Pumping stations to distribute wastewater, drinking water and Class A+ recycled water around the network

Oxley plant upgrade

Lawlex Newsfeed 21 February 2007
<http://abc.net.au/news/items/200702/1850317.htm?water>

Brisbane's Oxley waste water treatment plant is to receive a \$116 million upgrade to provide recycled water to local industry. The treatment plant will also be the first in the state "to process biosolids and convert them into high-quality fertiliser". The upgrade will provide 65 million litres a day of recycled water, ultimately reducing the pressure on the area's drinking water supplies.



Western Australia

Wiluna now has wastewater treatment plant

Water Resources Minister John Kobelke, 30 January 2007
www.mediastatements.wa.gov.au/media/media.nsf

A new wastewater treatment plant has been opened at Wiluna, Western Australia, with an upgraded treatment system comprising a pumping main, new pump station, connecting pipeline and an evaporation pond 1.5km south-west of Wiluna, replacing three treatment ponds located in the central town area.

Upgrade for Perth's wastewater treatment plants

<http://imagesignal.comsec.com.au/asxdata/20070131/pdf/00688946.pdf>

Sinclair Knight Merz, Black & Veatch and Thiess, under an alliance agreement with Water Corporation, are members of a consortium awarded a \$352 million contract to upgrade Perth's three main metropolitan wastewater treatment plants in Beenypup, Woodman Point and Subiaco. The five year program will see capacity increase to 15 million litres a day for the Beenypup and Subiaco plants.

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Recycled waste to boost aquifers

Lawlex Water Newsfeed 4/1/2007

www.theage.com.au/news/national/perth-tests-treated-sewage-for-drinking/2007/01/01/1167500065933.html

Western Australia's Water Corporation has launched a plan to use recycled sewage to restock diminishing aquifers, eventually using the highly purified recycled water to augment drinking water supplies. The four year \$38 million trial will involve the pumping of 1.5 gegalitres of treated sewage from the Beenyup wastewater treatment plant into Gnangara mound – a series of underground aquifers that feed Perth's water supply – where it would undergo further natural treatment as it is percolated through the aquifer over several years. Water Corporation chairman Jim Gill reportedly commented that in a bid to offset current public concern over the use of wastewater for drinking, the recycled water would "not be reused for a number of years, perhaps even decades". A recent poll found that 64% of the community supported the project.



Australian Capital Territory

ACT investigates wastewater

www.actew.com.au/News/ArticleDetail.aspx?id=707

www.chiefminister.act.gov.au/media.asp?media=2161§ion=24&title=Media%20Release&id=24

Chief Minister Jon Stanhope has advised that the government is to begin "comprehensive community consultation" on the use of recycled water following an "in-principle" proposal by Actew to investigate the recycling of wastewater to boost Canberra's potable water supply. Mr Stanhope stressed that, while the Cabinet would make the final decision based on Actew's advice, it was important that the community "was kept fully informed and was given the opportunity to debate such a significant reform to the potable water supply".

Northern Territory

Alice irrigation gets reused water

Lawlex Water Newsfeed 21 February 2007

www.powerwater.com.au/powerwater/news/media_releases/2007/1602_water_reuse_project.htm

PowerWater has released details concerning a \$10 million water reuse project in Alice Springs. The project involves the filtration of sewage water to such a standard that it can be used to irrigate crops. The water will be pumped to a natural underground reservoir at the Arid Zones Research Institute where it will be used to irrigate 60 hectares of crops, with a future prediction of up to 300 hectares. The project, which involves the construction of a new treatment plant, is expected to be completed by May 2007.

International

Recycled water recommended for Greece

AWA Water News 5 February 2007

www.sahra.arizona.edu/cgi-bin/newsclips/newsclip_view.pl?mode=newsclip_view&ID=15058

A dual pipe system has been recommended for cities in Greece where treated wastewater is discharged to the ocean instead of being recycled to irrigate farmland and urban lawns and parks. The National Institute of Rural Research confirmed that many crops, including sugar beets, maize and barley, can be irrigated safely with properly treated wastewater.

Florida water district approves \$40.5 million for alternative water supply projects

www.watereuse.org/news/wrnews_011607.htm

<http://thomas.loc.gov/cgi-bin/bdquery/z?d110:H.R.122:>

On the first day of the 110th Congress, Representative David Dreier (D-CA) reintroduced H.R. 122, a water recycling bill that authorises \$30 million in federal funding for two water recycling projects.

Flagstaff, Arizona OKs wastewater for snowmaking

www.watereuse.org/news/wrnews_011607.htm

www.azstarnet.com/news/160478

Flagstaff City Council in Arizona has signed a five-year contract extension to sell reclaimed water for snowmaking to the Arizona Snowbowl ski area. The project would use up to 1.5 million gallons of reclaimed water each day from November through February.

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'Recycled water only' golf courses, Cyprus

www.cyprus-mail.com/news/main.php?id=30481&cat_id=1

In response to drought conditions, the Water Development Department of Cyprus has announced that permits for new golf courses on the island would only be granted to businesses that plan to use water from desalination recycling schemes. Five golf courses have been given permission to present their plans to authorities as they have all made provisions for desalination uses that will provide water for the courses and accompanying housing units. Two others have been rejected on the basis that "permits should not be given for golf courses which will be watered from boreholes, rivers or government dams".

Florida community considers reclaimed water option

www.watereuse.org/news/wrnews_013007.html

www.gainesville.com/apps/pbcs.dll/article?AID=/20070129/LOCAL/701290303/-1/news

A northern Florida community has authorised a two-month, \$19,000 study to explore the costs and demand for a new reclaimed water system. Newberry, Florida currently uses reclaimed water in spray-field irrigation, but officials have decided to study piping reclaimed water to irrigate new housing developments, city buildings, schools, and businesses. The Suwannee River Water Management District has a grant that would cover up to 75% of the cost, which is projected to be about \$5 million.

Wider adoption of water recycling set for India

www.watereuse.org/news/wrnews_013007.html

www.expressstates.in/full_story.php?content_id=80363

Faced with widespread water shortages, India will need to move toward water recycling in residential complexes, offices, malls, and factories to meet water supply needs. Sanjay Nayyar, Business Head of the Waste Water Technologies division of the Acme Group, says the growing shortage of water and the consequent pressure on ground water will make water recycling an important part of India's future. Hotels, malls, and large apartment complexes operate their own wastewater treatment facilities under new Indian regulations. Nayyar says the government could further advance water recycling by offering incentives for new projects.



Australia

Ozwater 2007

4–8 March 2007, Sydney NSW

www.awaozwater.net/o7

Ozwater 2007 is heading for a record attendance and the sooner you register the better your chances of getting into number-constrained events like Sunday evening's Parsons Brinckerhoff Harbour Cruise Dinner. Ozwater happens at Darling Harbour in Sydney, from Sunday 4 March (starting full tilt at 1:30 pm, with conference sessions and workshops). A definite for learning and networking this year.

AWA Master Class – Water Infrastructure 1: Planning and Financing Public-Private Partnership Projects

18-19 April 2007, Sydney NSA

www.awa.asn.au/Content/NavigationMenu2/Education/NationalInterestEvents/bNov06bMasterClassEvaluatingWaterRecyclingProjects/default.htm

The Australian Water Association will run two Master Classes, sponsored by KPMG!, on Water Infrastructure which will focus principally on public-private partnerships (PPPs) and operation. Speakers include David Dobkins (AIPM), Steve Costello (National Water Commission), Paul Foxlee (Project Finance, KPMG) and Linda Gyzen (Alinta).

11th World Congress – Anaerobic Digestion: Bio-energy for our Future

23-27 September 2007, Brisbane

www.ad11.org

Brisbane Water's biosolids stabilisation plant using Cambi thermal pretreatment will feature both as keynote address (by Robin Lewis) and as technical tour at the upcoming International Water Association 11th World Congress on Anaerobic Digestion (AD11). Call for papers by 1 April 2007.



International

Everything About Water Expo 2007

15-17 March 2007, Chennai, India

www.eawater.com/expo2007/

For any organisations doing business in India, the Everything About Water trade exhibition being held 15-17 March this year will be of interest. Austrade is facilitating an Australian pavilion, which can have independent, grouped or virtual displays at competitive prices. Anyone interested should follow up with Gitesh Agarwal at Austrade in Chennai: gitesh.agarwal@austrade.gov.au

11th Annual Water Reuse Research Conference - Advancing the Science of Water Reuse and Desalination through Research

4-5 June 2007, El Paso Marriott, El Paso, Texas, US

www.watereuse.org/Foundation/2007conf.htm

The WaterReuse Foundation will convene the 11th Annual Water Reuse Research Conference on 4-5 June 2007 in El Paso, Texas. The Foundation's Research Conference is dedicated to showcasing the latest results of "cutting-edge" research on water reuse and desalination. The full conference program will be posted on 6 April 2007.





Website

Wastewater use in agriculture

www.personal.leeds.ac.uk/~cen6ddm/Reuse.html

Good reads

WSAA (2006) 'Refilling the Glass.'

Exploring the issues surrounding water recycling in Australia.' Water Services Association of Australia, WSAA Position Paper No. 02., Melbourne, Australia. www.wsaa.asn.au/

Securing Australia's Urban Water Supplies.

Marsden J, Pickering P (2006) 'Securing Australia's Urban Water Supplies: Opportunities and impediments.' Marsden Jacob Associates. Prepared for the Department of the Prime Minister Cabinet, Camberwell, Victoria, Australia. www.pmc.gov.au/water_reform/docs/urban_water_report.pdf

Risk Assessment & Health Effects of Indirect Potable Reuse Schemes

www.lgaq.asn.au/portal/dt?action=content&provider=JSPTabContainer

Overseas studies show high quality in recycled water

www.lgaq.asn.au/portal/dt?action=content&provider=JSPTabContainer

Desalination of Seawater and Brackish Water

A very comprehensive and thorough examination of the technologies, the issues associated with brine and other process residuals, energy use, costs, the quality of pre-treatment and final desalinated water. Cost \$242 plus postage and handling. Quote AWA no. for discount price. Email AWA Bookshop: bookshop@awa.asn.au

Issues encountered in advancing Australia's water recycling schemes

www.aph.gov.au/library/pubs/rb/2005-06/06rb02.htm

About ReWater

This newsletter, ReWater, has been designed to make information relevant to reclaimed/recycled water use in horticulture more accessible to horticulturalist (growers/farmers), the water industry and other interested people. It is part of the service provided by the National Coordinator for Recycled Water Development in Horticulture (www.recycledwater.com.au), funded through Horticulture Australia.

Back issues and instructions for subscribing to receive ReWater electronically quarterly can be accessed at www.recycledwater.com.au/newsletter.php

We would appreciate your feedback and suggestions for contributions. Please email to rewater@arris.com.au or contact us on 08 8303 6706.

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.

Edited and designed
by Arris Pty Ltd



ACN. 092 739 574

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