



## Thoughts from your Branch President

Welcome back to all our AWA members for an exciting 2011!

Unfortunately it seems to be getting harder every year to get back into the swing of things. The break seems shorter, the time with family more precious and the return harder to manage. Fortunately there is a string of high-calibre events scheduled in the AWA calendar this year to keep the interest going. Just a few events of note to get in the diary now are:

- AWA Ozwater in Adelaide 9-11 May;
- AWA Water industry Lunch 27 July;
- International Desalination Association World Congress – 4-9 September;
- WA Water Awards – combining the AWA and other Water Industry awards – 25 November.

And now back to my reflections whilst on holidays. Last year I was sitting at the in-laws farm in rural, central coast NSW, musing about the differing issues and attitudes to water across this nation. I recall that the big wet was just beginning over east after a decade of record droughts and yet the drought was continuing in WA. This year the situation had continued but worsened and my observations on the local community issues were quite surprising. Some things that never change but also how much things had moved-on in 12 months such as:

- Almost every river system in the east was in RECORD flood – Gulf rivers, Coastal rivers, Lake Eyre system, Murray-Darling basin;
- Even medium-sized rivers were flowing at daily rates greater than the total stored capacity in WA;
- The NO NEW DAMS chorus had been silenced and replaced by “why haven’t there been any flood mitigation works (dams) built in the last 25 years” and “look at all this water going to WASTE – we should be capturing it”;
- The talk was all about water management, flood warnings, levee banks, flood frequency;

It was also pleasing to note how much less vulnerable our water supplies are to catastrophic events when compared to other essential services like power – much of this built into the system through decades of prudent engineering.

On a more sombre note, we are frequently reminded how extreme our climate can get – fire, flood and cyclones. Having lived through the Brisbane 1974 floods in Milton/Rosalie, the recent events in SE Qld opened up many painful memories. Fortunately we lived on the top of a hill – where else would a future water engineer live – but one can never forget the stench of the sticky, black mud, the wrecked houses, lost or ruined precious memorabilia, bankrupted family businesses, and the decades it took for my friends to recover. Ironically, I had just been catching up with old school friends at the local Pub in Paddington near Lang Park and we were reminiscing on how the prolonged torrential rain was “just like ’74 – luckily Wivenhoe has been built ... ” As the family flew out of Brisbane in unbelievably torrential rain, little did we realise that the almost 40,000 feet of dense rain clouds would unleash such carnage on Toowoomba and the Brisbane valley. I can’t help but feel thankful that the dam had been built – how bad would it have been without it?

Noel Lavery  
Branch President  
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Australian Water Association  
Western Australian Branch

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Keeping you informed in WA Water

## Swan River Trust Riverbank Grants Scheme open

Community and conservation groups who help protect the Swan Canning Riverpark are being invited to apply for funding through the 2011 Riverbank Grants Scheme. Environment Minister Bill Marmion said the State-funded grants would be allocated to projects focused on shoreline protection and rehabilitation works on the Swan and Canning rivers.

Mr Marmion said the scheme, run through the Swan River Trust, offered grants to a range of projects, from tree-planting projects to larger, infrastructure developments.

"This is just one of the initiatives the State Government is taking to ensure the health and vitality of the Swan Canning Riverpark for generations to come," he said.

"Foreshore protection and rehabilitation is integral to the trust's work and riverbank funding will boost the capacity of local authorities and community groups to significantly improve shoreline condition. Shoreline vegetation provides food and habitat for wildlife, prevents erosion and improves water quality by filtering sediments, nutrients and pollutants before they reach the water."

"Riverbank grants also fund engineering works including riverwall and bank repair. Successful applicants last year included the City of Gosnells for revegetation and weed control along the Canning River; the City of Swan for foreshore stabilisation and revegetation along the Swan Riverside Regional Park, and the City of South Perth for the restoration of a 400m riverwall south of Canning Bridge. Projects are based on a cost-sharing arrangement and must be carried out on publicly- owned land in the Swan Canning Riverpark."

Applications close 5pm on Friday, April 1. For more information on how to apply and details of past projects call the trust on 9278 0900 or visit [www.swanrivertrust.wa.gov.au](http://www.swanrivertrust.wa.gov.au)

## Monash Centre for Water Sensitive Cities bids for CRC

There has been a nation wide call for the establishment of a national centre to drive the research, design and development of the socio-technical systems that will make water sensitive cities in Australia a reality. Monash University's Centre for Water Sensitive Cities is leading an application to establish a Cooperative Research Centre in the 14th round of Australian Government's Cooperative Research Scheme, notionally, the CRC for Water Sensitive Cities (CRCWSC).

The CRCWSC aims to address 4 key themes – Society, Future Technologies, Water Sensitive Urbanism and Adoption Pathways. This research will be driven by well established and respected researchers at the 3 research hubs – The University of Queensland, Monash University and The University of Western Australia and will build on existing research efforts, particularly the Cities as Water Supply Catchments research program. Their multi-centre multidisciplinary team will be supported by expertise in planning and design from AECOM and statutory planning and legal expertise from Maddocks.

The CRCWSC Project Team is now calling for expressions of interest from organisations with an interest in the development of water sensitive cities prior to finalizing its application for Australian Government funding as part of the 14th CRC Selection Round.

This presents the opportunity for industry to assist the Project Team finalise its research priorities and also to consider how your organisation might wish to be involved in tackling some of the most pressing issues in urban water management.

More information [www.watersensitivecities.org.au/](http://www.watersensitivecities.org.au/)

## Real Time Monitoring of the Swan-Canning River Basin

Western Suburbs Councils will be able to keep better track of the health of the Swan-Canning River Basin and its coastal receiving waters thanks to a collaboration with The University of Western Australia. WESROC, the group of seven Local Government Councils - Subiaco, Cottesloe, Claremont, Peppermint Grove, Mosman Park, Nedlands and Cambridge - have recently funded a project to be undertaken by UWA's Centre for Water Research.

WESROC has joined a number of other organisations participating in the Centre's Real Time Management System Online (RMSO) a powerful freely available interactive website. The website provides 'real time', easy to understand information on the impacts of development, climate change, effluent disposal, nutrient enrichment and pathogen dispersal. It is already in use locally at Lake Monger and in Sydney, Melbourne, Singapore and Argentina.

The Centre for Water Research will implement a seamless portal to the RMSO website allowing Council staff and elected representatives and ratepayers to take advantage of a fully three dimensional, high resolution, integrated simulation of the Swan-Canning Estuary and the nearby coastal ocean.

Apart from providing reports on the overall ecological health of these water bodies, RMSO will also predict in real time the dispersion of effluent from all contributing streams, storm water drains and effluent overflows.

## Investing in Australia's desalination industry

The National Centre of Excellence in Desalination has awarded nearly \$3 million in funding to research projects investigating ways to advance desalination technology. Announcing the Centre's second round of funding in December, Parliamentary Secretary for Sustainability and Urban Water, Senator Don Farrell, said the projects were an important investment in securing future water supplies for all Australians.

"These projects demonstrate how the National Centre of Excellence in Desalination is delivering on its mission to develop and commercialise new desalination technologies, with emphasis on the energy efficiency of the desalination process," Senator Farrell said.

The 12 projects include research into improving membrane performance, new types of desalination for remote areas, forward osmosis for simultaneous production of water and fertiliser, and solar powered desalination for rural communities.

National Centre of Excellence in Desalination CEO Neil Palmer (*who will be talking at our evening technical session in June*) said "the Centre is delighted with the strong response of the Australian research and business communities to work together on projects that will make water supply in arid areas more reliable and economical."

The Centre's investment of nearly \$3 million in funding for the 12 projects is expected to generate significant in-kind and industry contributions toward ongoing research activity. The Australian Government has committed \$20 million in funding over five years to the National Centre of Excellence in Desalination, through the *Water for the Future* initiative.

"Investing in research and development is crucial to developing a sustainable desalination industry in Australia," Senator Farrell said. "Desalination is an important component of securing water supplies in Australia – it can provide water all year round, regardless of rainfall. However, we need to continue to improve the desalination process, in particular energy efficiency."

Chair of the National Centre of Excellence in Desalination, Graeme Rowley, said "the Centre represents an excellent opportunity for Australia to be a world leader in commercial and technical development of desalination resulting in the provision of clean water to a thirsty world."


Project Title	Project Leader	Other Research Participants
Development of Cleaning Guidelines for Desalination Membrane Users	Victoria University	Integrated Elements, Nalco Australia Pty Ltd
Non-Brittle Ceramic Hollow Fibre Membranes	Monash University	The University of Queensland
Mitigation of Membrane Biofouling Using Natural Polysaccharide Surface Coating	CSIRO	-
Development of Universally Applicable Coatings and Additives for State-of-the-Art Reverse Osmosis and Pre-treatment Membranes: Non-Leaching, Antimicrobial, Low Biofouling, Chlorine Resistant and Improved Compaction Properties	Flinders University	Siemens, SA Water, Wind Prospects,
Real Time Detection and Management of Biofouling Conditioning Films in Seawater Reverse Osmosis	University of New South Wales	InPhaze Pty Ltd, SA Water, Sydney Water, University of South Australia
Fertilisers as Draw Solutes for Forward Osmosis Desalination: A Novel Approach for Fertigation in the Murray Darling Basin	University of Technology, Sydney	CSIRO, Korea University, NSW State Water Corp, Yale University
Optimising Low-Pressure Membrane Pretreatment for Desalination	University of New South Wales	Curtin University, Siemens Water Technologies Australia, Veolia Water Australia, Water Corporation
Silica Removal from Groundwater for Reverse Osmosis Water Recovery Enhancement and Waste Brine Volume Reduction	Victoria University	Hatch Associates, Origin Energy, Minara Resources, University of Texas, El Paso
Application of Capacitive Deionisation in Inland Brackish Water Desalination	University of South Australia	LT Green Energy, Power and Water Corporation, SA Water, Water Quality Research Australia
Control of Organic Membrane Fouling Through Limitation and Control of Extracellular Microbial Products	Murdoch University	Environmental Biotechnology Cooperative Research Centre, Singapore Membrane Technology Centre, Nanyang Technological University Singapore, University of California, Irvine, WA Chemistry Centre
Tjuntjunjarra Remote Inland Indigenous Community Solar/Waste Energy Groundwater Desalination Project	Murdoch University	Institute of Filtration and Techniques of Separation, France, memsysclearwater distribution Pte Ltd, Parsons Brinkerhoff, Singapore Membrane Technology Centre, Nanyang Technological University Singapore, University of Technology, Sydney, WA Department of
Assessing and Mitigating Environmental Impacts of SWRO Outfalls on Key Benthic Marine Organisms	Deakin University	University of Western Australia

The WA Branch of the Australian Water Association invites you to:

## Water Innovation in Australia – how are we doing?

**Thursday 24<sup>th</sup> February 2011 at 5.30pm**

**Dr Mary Turonek**

<b>Location</b>	Derbarl Yerrigan Room, Water Corporation John Tonkin Centre, Newcastle Street, Leederville
<b>Agenda</b>	5.15pm Arrival and Registration 5.30pm Presentation 6.30pm Refreshments
<b>Abstract</b>	<p>The need for innovation in technologies which adapt to and mitigate water shortages has led to the establishment of Centres of Excellence in Water Recycling and Desalination and increased funding for CSIRO research particularly in its flagship programs. We anticipate that similar programs may be implemented in respect to floodplain management in response to recent widespread flooding on the east coast and the likelihood of further flood events.</p> <p>It is interesting to determine in which areas innovation is most concentrated, and to gauge whether ideas originate in Australia or overseas. One qualitative and reliable measure of innovation is patent filing data. Griffith Hack has investigated patents filed in Australia since 2003 that are related to technologies that save or increase the supply of fresh water.</p> <p>Australian innovators are the leading source of 'water' patents filed in Australia, filing over 40% of Australian patents in this area. This proportion is much higher than we have seen in other areas of technology, suggesting a vibrant domestic innovation sector. The majority of these patents were filed for what can be described as 'domestically' oriented inventions, such as rainwater tanks and water saving devices. Australian innovators were much less prominent in 'industrial' inventions, such as water treatment and desalination.</p> <p><b>Australia is increasingly well placed to develop and export industrial water management technologies, but the patent data suggests that Australian companies and inventors are not yet exploiting this opportunity.</b></p> <p><i>Mary Turonek has a PhD in Physical and Inorganic Chemistry from the University of Adelaide. She undertook post-doctoral research at the University of Warwick in the UK in the field of macrocyclic chemistry, and later took up a research fellowship at Murdoch University funded by AMIRA in connection with Bayer liquor chemistry. She registered as a Patent Attorney in 2000 and has acted for a range of clients including both research-based organizations and corporations with interests in the mining and energy resources sectors. Mary has developed expertise in a broad range of technologies throughout her professional career and is a skilled practitioner in conducting patent oppositions before the Australian Patent Office.</i></p>
<b>Registration Fees</b>	<b>FREE</b>
<b>Enquiries</b>	<b>Cath Miller</b> Phone: 0416 289 075 Email: <a href="mailto:wabranch@awa.asn.au">wabranch@awa.asn.au</a> Fax: 08 6210 1675
<b>RSVP</b>	<b>Tuesday 22<sup>nd</sup> February to Cath Miller (Numbers required for catering)</b>
<b>REGISTRATION MT0211</b> <b>Delegate Details</b> (please detach this section if faxing back)	Name (S) _____ Position _____ Organisation _____ Telephone(w) _____ Mobile _____ Facsimile _____ Email _____ Special/Diet Requirements: _____
<b>Sponsors</b>	

## Integrated Resource Planning for Urban Water Workshop

In 2007 the National Water Commission, in partnership with Water Services Association of Australia (WSAA), identified several important areas where nationally coordinated action would benefit the Australian urban water sector and progress commitments made under the National Water Initiative. The Integrated Resource Planning for Urban Water project forms an important component of work commissioned to address key water issues.

The project comprises a series of resource papers on various topics, two case studies, an updated 'Guide to demand management and integrated resource planning for urban water' as well as an upgraded demand forecasting and options model called the Integrated Supply–Demand Planning (iSDP) model. The project complements the COAG urban water planning principles by offering practical guidance and contemporary tools to deliver sustainable water supplies in a changing climate.

The National Water Commission and the Institute for Sustainable Futures are running a series of 1- day workshops across Australia. The workshops provide an opportunity for you to hear about contemporary national policy issues and direction for urban water planning and provide a demonstration of the suite of national resources and tools. The workshops are targeted at urban water managers responsible for planning long-term, sustainable, urban water supply options in cities and towns.

### Perth workshop

The workshop will be held at the offices of the Water Corporation located at 629 Newcastle Street in Leederville on Friday 8 April 2011. The workshop will run from 9.30am to 3pm.

The keynote address will be provided by Mr Mark Leathersich, Manager of infrastructure planning, Water Corporation.

This workshop will be held in two sessions:

### Session 1: Tools and Resources for the Urban Water sector

This session showcases the suite of national resources and tools that have been developed to assist practitioners in urban water sector to deal with emerging issues in supply-demand planning. It will discuss the COAG national urban water planning principles and demonstrate how the iSDP model and other IRP resource align with these principles.

### Session 2: The Integrated Supply- Demand Planning (iSDP) model

The project has upgraded the integrated Supply- Demand Planning (iSDP) model that facilitates both a sophisticated, end-use water demand forecast and a balanced assessment of a broad range of demand management, supply augmentation and substitution options. This session demonstrates the full capacities of the iSDP model in the context of IRP and the challenges facing the Australian water industry. Through demonstrating the capacities of the model in a workshop setting, potential users will be able to see the upgraded functionalities and assess whether the model would be useful for water planning in their region.

**To register** please click on the link below. Please register by 1 April

<http://surveys.uts.edu.au/surveys/irpforurbanwaterroadshow/index.cfm>

For any questions regarding the workshop please contact: Louise Boronyak Project Co-ordinator, Institute for Sustainable Futures, University of Technology, Sydney Ph: 02 9514 4974 E mail: [Louise.Boronyak@uts.edu.au](mailto:Louise.Boronyak@uts.edu.au)

For any questions regarding the National Water Commission contact: Dr Paul Smith Urban Water Reform, National Water Commission Ph: 02 6102 6045 E mail: [Paul.Smith@nwc.gov.au](mailto:Paul.Smith@nwc.gov.au)

*The Integrated Resource Planning for Urban Water project has been funded by the National Water Commission. The project was led by the Institute for Sustainable Futures at the University of Technology, Sydney, involved collaboration with WSAA, the Commonwealth Scientific and Industrial Research Organisation (CSIRO), Brisbane City Council, Riverina Water County Council and Wagga Wagga City Council.*

## Using mining by-products to reduce algal blooms

CSIRO research has shown that some mining by-products can be effective in preventing nutrients from entering river systems, thereby reducing the potential for algal blooms.

A joint project between CSIRO and the Western Australian Department of Water investigated a range of mining industry by-product materials, which are currently unused, to determine whether they could instead be used to filter nutrients from natural waters or to treat wastewater that would otherwise be discarded.

CSIRO project leader, Dr Grant Douglas, says the use of abundant, low-cost by-product materials generated from mineral processing offers a potentially cost-effective and environmentally-friendly strategy for the removal of nutrients.

"The largely unexploited by-product materials we generate in Western Australia could be developed as 'designer' contaminant adsorbents," Dr Douglas said.

After assessing a range of potentially suitable by-products to determine their efficacy in removing nutrients or reducing acidity, a four-year field trial was conducted with a potentially suitable by-product.

The by-product was added to soil at a turf farm in the Swan Canning catchment, and was shown to remove 97 per cent of phosphorus and 82 per cent of nitrogen from the shallow groundwaters. Adding the by-product also reduced water use and

With around 400 hectares of turf farms currently under cultivation over the Swan Coastal Plain, use of this by-product as a soil amendment on turf farms would equate to the removal of around two tonnes of phosphorus and nitrogen from groundwater each year.

"This is good news for the health of Perth's waterways, as it could lead to a substantial reduction in the key nutrients that eventually contribute to algal blooms," Dr Douglas said.

"The productive use of the by-products also has the potential to reduce the environmental footprint of mining and mineral processing industries by lowering by-product stockpiles."

The potential benefits of this project could be realised anywhere in the world where similar by-product materials are produced and similar water management issues exist.

The research is being delivered through CSIRO's Water for a Healthy Country National Research Flagship for the Water Foundation of Western Australia, which promotes water-related research and development activities within Western Australia.

## Solar Floats into the Future

Solar power may be clean and green and very efficient in terms of space requirements when it comes to rooftop solar energy systems; but major solar farms require large tracts of land. Addressing this issue is Israel-based Solaris Synergy's (F-CPV) system which sits on water rather than on land.

Featuring a modular design, the F-CPV system can be tailored to produce anything from a few kilowatts of electricity to many megawatts. Made from plastic and fibreglass, the platform can also significantly reduce evaporation and growth of algae - an aspect that may be of particular interest to Australian farmers as the system could be installed in farm dams.

Israeli startup Solaris Synergy took first prize at the Israel national Cleantech Open IDEAS competition. Solaris went on to rank fourth in a field of national winners from 20 countries at Cleantech Open IDEAS, an international competition intended as a "launching pad" for novel approaches to worldwide energy, environmental and economic challenges

"There is a huge amount of inland water in the world, and many confined bodies of water are located in areas with excellent solar insulation," says Solaris CEO Yossi Fisher. "The system works best in areas of strong sunlight, such as Africa, Asia, Australia, Mediterranean countries and South, Central and southern North America."

Constructed of lightweight plastic and fibreglass, the Lego-like modules fit together in grids configured to fit the shape of the host body of water - be it fresh-, salt- or wastewater.

This solar-on-water platform doubles as a breathable reservoir cover that significantly reduces evaporation and eliminates harmful organic and algae growth. Each grid can generate 200 kilowatts of power.

The modules are faced with a curved mirrored film that focuses sunlight into a thin line; meaning that less of the costly silicon is needed to be used for each module. This has an added environmental benefit since silicon production releases contaminants into the air.

However, this focused sunlight also means increased heat and silicon converts light into energy more efficiently at cooler temperatures, so Solaris developed a patented technology that uses the water underneath the grids to keep the silicon cooler than on conventional solar panels.

"We have the only cold silicon in the world and we are generating energy more than 20% more efficiently because of this," Fisher says.

Because there is no friction between the grids and the water, it only takes one small engine to slowly rotate the grids to keep the light focused on the line of silicon material. The rotation is based on a sophisticated sun-tracking algorithm programmed into a remote controller.

The controller also moderates the direction of the rotation and the speed of the engine. A central server receives data over a cellular line from the controller via an antenna, allowing the technical crew to keep a watchful eye on how the system is functioning.

The two-year-old company has a working prototype and is due to install a pilot project in 2011 under the auspices of Mekorot, Israel's water authority.

Floating Solaris grids on top of Israel's more than 400 recycled wastewater reservoirs would enable the country to realize its goal of generating 10-20 percent of its energy from renewable sources by 2020, Fisher says.

A second pilot installation is planned at a reservoir near Marseilles in cooperation with France's electric company, partially funded by the joint Israel-European R&D project Eureka.

## Luc Kox joins AECOM

Global technical and professional services consultancy AECOM has appointed Luc Kox to the role of Business Development Manager, Water & Infrastructure Services in its Perth office.

Mr Kox will be responsible for early identification of opportunities, and positioning for and securing water and infrastructure projects across the Western Australia/Northern Territory region.

Mr Kox previously held various roles with DHV, including Water Industry Director and Business Development and Sales Manager. He has worked across the Netherlands, Asia and Australia.

Group Leader Water and Infrastructure Services Konrad Schmitz said Mr Kox would significantly boost AECOM's ability to identify and secure new projects.

"We are delighted to have someone of Luc's calibre joining our team, and his extensive business development experience will help us identify and drive even more exciting opportunities across the region," Dr Schmitz said.



"H2Oz careers in water" is a national campaign to address the industry's skills shortage by attracting talented and high calibre candidates to the water sector.

With the establishment of the brand and website, AWA is now able to provide a unique, sophisticated and efficient water job advertising service. The H2Oz recruitment platform is accessible to all members and stakeholders with promotion to jobseekers within and outside of the water sector, making it the place to advertise and find your next role in the water sector. For more information about this new opportunity, visit our website [www.awa.asn.au/Water\\_Jobs.aspx](http://www.awa.asn.au/Water_Jobs.aspx) or [www.h2oz.org.au](http://www.h2oz.org.au)

With H2Oz you'll be able to:

- Post and edit your branded job advertisements at any time
- Increase exposure through H2Oz's industry and external marketing
- Access registered candidates' details and resumes
- Automatically notify registered candidates of new vacancies
- View the response rate and success of your job postings

## Tours Commence at Water Recycling Plant

The Water Corporation has begun tours of its newly constructed Advanced Water Recycling Plant and Visitor Centre in Craigie.

The facility has been built for the Groundwater Replenishment Trial which began recharging recycled water into groundwater in November 2010.

The Trial will build knowledge of the technical, health, environmental and social aspects associated with groundwater replenishment.

Water Corporation Chief Executive Officer, Sue Murphy, said the Visitor Centre will play a key role in helping the community grasp the concepts of water recycling in a local context.

"The Trial is very much a community focussed project," said Mrs Murphy. "The Visitor Centre will provide the public with an opportunity to tour the facility and learn more about groundwater replenishment, the recycling process and how this can help address the challenges of our drying climate."

Mrs Murphy said visitors would be taken on the water cycle journey through the use of interpretive walkways and film and learn how groundwater replenishment can play a role in sustaining Perth's water supplies.

"We invite anyone who has an interest in our water future to visit the facility and see it for themselves," she said.

For more information or to book a tour phone 9420 2655 or email [groundwater.replenishment@watercorporation.com.au](mailto:groundwater.replenishment@watercorporation.com.au)

For more information on the Trial or to fill out an online booking form visit [www.watercorporation.com.au/G/gwr.cfm](http://www.watercorporation.com.au/G/gwr.cfm).



*Recharge Bore - Visitors gather around the recharge bore, where 5ML of recycled water is pumped into the groundwater a day.*



## WaterAid Launches NEW PGA Pro-Am Corporate Event

WaterAid will launch a new golf tournament this year in Perth, in conjunction with the Professional Golf Association of Australia (PGA).

The event will be held on Thursday 19th May 2011 in the Perth Metro area as part of the PGA WA Pro-AM calendar for 2011.

Approximately 50 professionals are expected to play in teams of 2 professionals and 2 corporate amateurs, with up to 108 players expected on the day.

This event will lift the profile of the charity and its work, amongst the broader corporate sector in Australia.

The format of the event will also allow corporate business players the opportunity to play shoulder to shoulder with some of Australia's best professional golfers.

More detailed Information about the event will be available shortly from both the PGA and WaterAid, including their respective websites.

If you would like to know more about the event or you would like to register your interest to sponsor and play on the day, please contact the PGA in WA on (08) 6430 8100.

## Water Forever in a drying climate - Improving our levels of efficiency and reuse

**Sue Murphy, CEO, Water Corporation**

**12:00-1:00pm Friday 18 February 2011**  
**Atrium theatre - Level 4, 168 St Georges Tce**

Western Australia is a dry State within a usually dry continent which has experienced the impact of climate change somewhat earlier and with more severity than most parts of the country. This is particularly evident in the substantial decline in rainfall which has occurred since the early 1990's which shows a 50% reduction in streamflows as well as groundwater levels which are falling dramatically. This drying trend is continuing to worsen, surpassing even the conservative climate projections used in water supply planning only a few years ago.

Given the lack of rain over the last winter and with dam levels below one third capacity, the Water Corporation has moved quickly to respond to the immediate need to reduce our consumption of water. The Corporation is working with the community to 'bank' water savings achieved this summer with the aim of avoiding more severe restrictions in coming years. Additionally, the Corporation is recognising the importance of increasing our level of recycling and diversifying our water sources.

In this presentation, Sue Murphy, Chief Executive Officer of the Water Corporation, will outline how the Corporation is partnering with the community to reduce their water use; progressing plans to increase the amount of water that is recycled; and developing new, climate independent water sources.

Sue Murphy is currently the CEO of the Water Corporation. Sue is a Board Member of the University of WA Business School and the Water Services Association of Australia (WSAA), of which she chairs a number of Committees. In 2009 & 2010, Sue was listed in the top 100 most influential engineers in Australia by Engineers Australia and was elected to join the Fellowship of the Australian Academy of Technological Sciences and Engineering in November 2009.

No rsvp required.  
For further information, please contact  
[newwaterways@water.wa.gov.au](mailto:newwaterways@water.wa.gov.au)

## IDA World Congress 2011

The International Desalination Association is pleased to present the IDA World Congress 2011 on Desalination and Water Reuse. This biennial event will be held from 4 - 9 September 2011 at the Perth Convention and Exhibition Centre, Perth Australia. Themed, "Desalination: Sustainable Solutions for a Thirsty Planet" the World Congress is the premier global event on desalination and water reuse.

The theme reflects IDA's commitment to environmental responsibility in desalination and the efforts of the global desalination industry to further reduce energy requirements for desalination as its use becomes an increasingly important part of global water solutions for the 21st century.

IDA has held biennial Congresses and Exhibitions since 1985 in locations all over the world, each larger in scope and attendance. The IDA World Congress 2011 will feature four days of technical sessions, lectures, roundtable discussions and interactive sessions, as well as plant tours and several workshops following the conclusion of the technical program.

# Looking for your talent pool?



H<sub>2</sub>Oz careers in water is a national campaign created to address the industry's skills shortage by attracting talented and high calibre candidates to the water sector.

AWA now offers its jobs service through the enhanced and professional H<sub>2</sub>Oz recruitment system.

## With H<sub>2</sub>Oz you'll be able to:

- Post and edit your branded job advertisements at any time
- Increase exposure through H<sub>2</sub>Oz's industry and external marketing
- Access registered candidates' details and resumes
- Automatically notify registered candidates of new vacancies
- View the response rate and success of your job postings

Visit [www.h2oz.org.au](http://www.h2oz.org.au) to find out more!



## waterAUSTRALIA

waterAUSTRALIA is the new organisation formed to be the international flag carrier to the Australian water industry's advanced knowledge and products. Their vision is to offer Australia's water success to the world.

AWA is the incorporation member and subscribers are still joining at a steady rate with a number of larger companies taking up Foundation sponsorship.

Last month waterAustralia was at G'Day USA. This Austrade organised mission was co-badged by waterAUSTRALIA and the theme was "Integrated Water Management Solutions for Every Challenge".

In November, waterAUSTRALIA's chairman, Jim Gill, the Australian Government's Water Supplier Advocate, Bob Herbert and CEO Les Targ briefed the WSAA Members meeting and proposed the formation of a small working party to address local industry development issues and to provide better access to Australian urban utility projects.

waterAUSTRALIA is progressing the idea of a merger with South Australia's Water Industry Alliance with the recent signing of a Heads of Agreement. The Agreement creates a framework to negotiate a merger document and for members of both organisations to consider the proposal.

It is clear to the Board of waterAUSTRALIA that a national organisation is highly desirable. The Water Industry Alliance has been very successful in facilitating growth of sales by its members outside of South Australia and provides a range of services that waterAUSTRALIA believes would add great value to companies in other states. A merger, therefore, does seem to be an attractive option. More news will be posted as it becomes available.

waterAUSTRALIA will also be attending a number of other exhibitions during 2011.

They include:

- Ozwater (May)
- Singapore International Water Week (July)
- International Desalination Association World Congress (September)

More information from [www.wateraustralia.org](http://www.wateraustralia.org)

## FIRST ANNOUNCEMENT WA Water Industry Lunch

27th July 2011 - Hilton Hotel

Guest Speaker: Maree De Lacey  
A/Director General of the Department of Water

Following in the footsteps of Hon Dr Judy Edwards, Hon Dr Geoff Gallop, Hon John Kobelke, Kim Taylor, Sue Murphy and Hon. Dr Graham Jacobs, Maree De Lacey will be the guest speaker at the AWA Water Industry Lunch on Wednesday 27th July 2011. Corporate tables and individual bookings are welcome. More details in March Newsletter.

### Sustainability Leadership – How to Facilitate Positive Change

A series of training sessions designed to create and empower sustainability change agents. This full day course has been designed for professionals at an entry to middle-management level who are seeking to promote more sustainable practices within their organisations. The course focuses on the behaviours and strategies effective sustainability change agents typically use. Participants will start the process of building self-awareness as an emergent leader and build a developmental plan to begin the process of becoming a more effective sustainability leader. For further details on course in Perth on 1 June go to the website.

[http://www.awa.asn.au/Sustainability\\_Leadership.aspx](http://www.awa.asn.au/Sustainability_Leadership.aspx)

### Climate Change Adaptation Planning

This course was developed in response to the call from AWA members. The course will assist attendees in developing a better understanding of the adaptation risks their organisation face due to climate change; help them to take the first steps in developing a climate change adaptation plan; and will identify tools that will support them in implementing their plan. This is to be achieved by stepping through a planning process, demonstrating application through scenario's and real life case studies. At the completion of the course, attendees will have developed a plan of action to build upon once back in the workplace. Please email [gpriest@awa.asn.au](mailto:gpriest@awa.asn.au) to register your interest in attending.

### AWA Position Vacant

#### Project Manager - School and Community Education

- Do you have a background in education programs for sustainability outcomes?
- Enjoy communicating and liaising with a range of stakeholders
- Interested in joining a unique, dynamic and environmentally conscious sector?

This position sits within the National Programs Team which manages industry networks and projects from AWA's head office in St Leonards. We are seeking a Project Manager to manage a broad range of school and community education programs on behalf of the industry.

To view the Position Description please visit working at AWA on website [www.awa.asn.au/AboutUs.aspx?pageid=4294970817](http://www.awa.asn.au/AboutUs.aspx?pageid=4294970817)

For further detail about this role, contact Fiona Mackenzie 02 9436 0055. Applications close 9am, Monday 7th March.

## Leeuwin current hots up in 'La Nina' year.

The La Nina phenomenon responsible for the devastating Queensland floods is also affecting Western Australia and will continue to do so until at least middle of 2011, according to a leading researcher at the Oceans Institute at The University of Western Australia.

The source waters of the Leeuwin Current are already several degrees warmer than normal, said Professor Charitha Pattiaratchi.

"According to satellite data obtained from NASA, the ocean off the North-West of WA - that is, the start of the Leeuwin Current - is more than three degrees warmer compared to last year," Professor Pattiaratchi said.

"The water temperatures are higher than 31 degrees, which I have not seen before in more than 20 years of researching WA's coastal waters. The current La Nina is one of the strongest ever recorded."

Professor Pattiaratchi is Winthrop Professor of Coastal Oceanography and Head of the School of Environmental Systems Engineering. He is an internationally renowned researcher in the effects of climate change on coastal regions of Western Australia, particularly focusing on ocean currents, wind and wave climate, sea level variability, coastal flooding and beach stability.

The Leeuwin Current is a warm current that travels southward along the WA coast and into the Great Australian Bight. In La Nina years, it typically flows stronger bringing warmer water southwards.

La Nina is a global phenomenon and the floods experienced recently in Sri Lanka and Brazil, and the accompanying loss of lives, were also attributed to La Nina.

Professor Pattiaratchi said that based on previous La Nina events we know what the effects on WA will be, but it is not possible to predict their severity.

In previous La Nina years, the South-West of WA has experienced:

- Above average rainfall;
- A higher number of tropical cyclones;
- Higher mean sea levels during winter, leading to increased coastal erosion under storm events; and
- Increased settlement of rock lobster larvae (puerulus), which is expected to result in a higher rock lobster catch in 2015 (four years from now).

## Carbon Dioxide v Temperature

Ten years after the (in)famous "hockey stick" graph was published in the 2001 IPCC report (using data from Mann et al. 1999) suggesting a catastrophic rise in temperature as the levels of carbon dioxide increased in the atmosphere, I once again, spent a few hours during the holidays getting the latest data from the same sources.

The graphs below show the monthly mean carbon dioxide (ppm) measured at Mauna Loa Observatory, Hawaii with the data collated and published by the National Oceanic and Atmospheric Administration and the UK's Met Office Hadley Centre's HadCRUT3 Diagnostics: global average mean(NH+SH)/2 (Calculating the global mean as the mean of the northern and southern hemisphere averages) shown as an anomaly in degrees C wrt 1961-1990 avg.

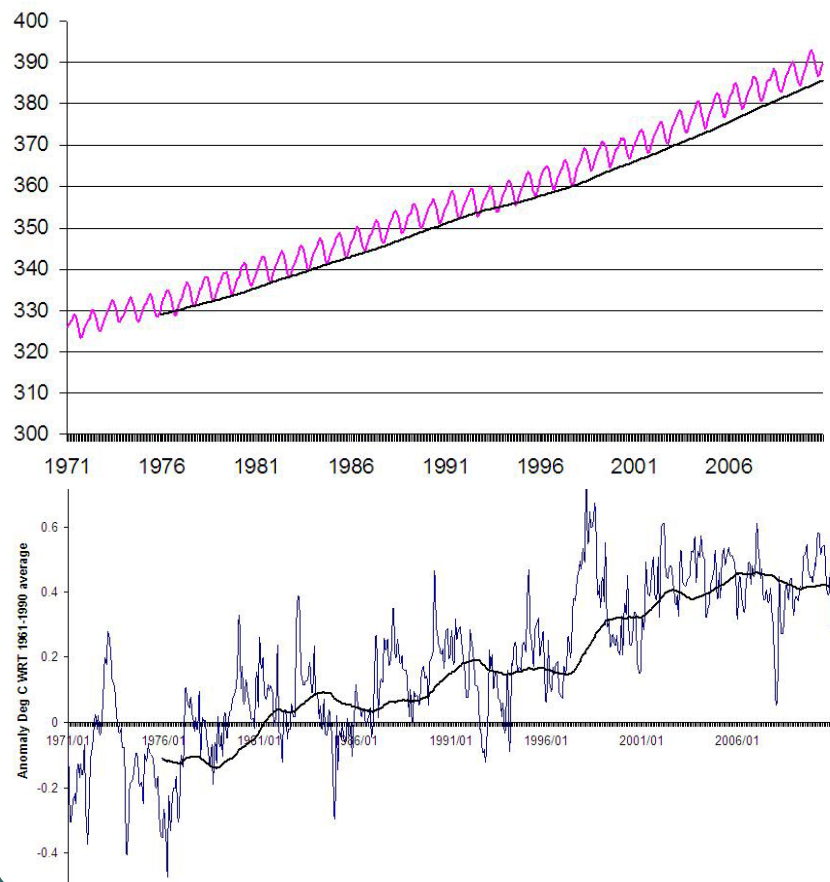
Both graphs plot the monthly data for the last 30 years from January 1971 to December 2010 with a five year moving average. The once-linear correlation between CO2 and temperatures is not quite so convenient after 2004, and I still question both relevance and causation assumptions of the carbon induced AGW hypothesis.

Last year, I noted that Global Warming had morphed into the disingenuous Dangerous Climate Change and this too has now shrunk to Climate Change which even the most hardened sceptic doesn't deny - perhaps a sense of doubt is entering the debate.

I still feel that international attention and money would be better spent on adaptation to the ever changing climate and dealing with real world issues like overfishing, global food security and fact that close to 30,000 people die each day from starvation.

More scrutiny must be given to the proposed Carbon Tax and subsequent ETS if the diverging trend continues.

*Cath Miller AWA WA Branch Manager and Editor*



## Membership News - February 2011

Please welcome the 9 new members who joined the WA Branch in December and January.

Member Type	First Name	Last Name	Organisation	Member Since
Individual	Elizabeth	Williams	Analytical Reference Library	21/01/2011
Individual	Kim	Rodgers	Analytical Reference Laboratory	20/01/2011
Individual	Ross	Davis		11/01/2011
Individual	Ronan	Holt	Monadelphous	11/01/2011
Corporate Plus	Murray	Munro	Schneider Electric (Australia) Pty. Limited	22/12/2010
Corporate Plus	Wayne	Farrell	Greenspan-MCE	20/12/2010
Student	Todd	Panietz	Student	8/12/2010
Individual	John	Hoskins	Gateway Technical Services	6/12/2010
Student	Ben	Cole	Student	1/12/2010



### Submissions close Friday 18 February

Abstract and interactive workshop submissions for the 14th International River *symposium* close ON Friday 18 February. To submit an abstract or workshop, visit our website - [www.riversymposium.com](http://www.riversymposium.com) - and follow the link on the home page. Remember, all submissions must relate back to the overall theme of the conference, The Value of Rivers.

### 2011 program

The 2011 program will have a strong focus on the management and recovery of our rivers and waterways, in accordance with the overall theme, **The Value of Rivers**. Concurrent sessions, keynote presentations and study tours will allow delegates to participate in discussions on the economic, social and competing values of rivers as well as showcasing case studies and practical examples. The key program focuses for 2011 include -

1. **Natural Disaster** - The value of integrated river basin management to mitigate adverse impacts of climatic extremes
2. **Economic** - The economic value of rivers
3. **Social** - The social value of rivers
4. **Ecology** - The value of science and rivers
5. **Competing Values** - Competing values of rivers
6. **Science-Policy** - The river science-policy interface

To maximise knowledge sharing and networking opportunities, this year's program will encourage interaction among delegates through different feature sessions, workshops and networking events. Keep checking the website - [www.riversymposium.com](http://www.riversymposium.com)

## WA Water Event Calendar

AWA WA Technical Event: Mary Turonek – Griffith Hack	Water Innovation - How are we doing	24-Feb-11
AWA WA Technical Event: Jeff Charrois CWQRC	Global Drinking Water Research AWA	17-Mar-11
<i>Integrated Resource Planning for Urban Water Workshop</i>		<i>08-Apr-11</i>
<i>WaterAid Trivia Night</i>		<i>13-Apr-11</i>
AWA WA Technical Event: ERA WRMP Briefing	City West Function Centre	14-Apr-11
<i>Ozwater 11 (9 – 11 May 2011)</i>		<i>09-May-11</i>
AWA WA Technical Event: Steve Hrudey et al	issues for drinking water quality half day	17-May-11
<i>WaterAid ProAm Golf Day</i>		<i>19-May-11</i>
WA Branch Seminar: Water Future Forum	<i>Half Day Joint with YWP</i>	<i>26-May-11</i>
<i>AWA National Office Sustainability Training Course</i>		<i>01-Jun-11</i>
AWA WA Technical Event: Neil Palmer NCED progress		23-Jun-11
<i>WaterAid Ball</i>	Hyatt Winter in July	<i>01-Jul-11</i>
AWA WA Water Industry Lunch	Acting D/G DoW Maree de Lacey	27-Jul-11
<i>AWA YWP Mid Year Mingle</i>	<i>Mentoring Event Launch</i>	<i>20-Jul-11</i>
AWA WA Technical Event: DoW – Draft Water Services Bill		18-Aug-11
<i>IDA World Congress Sept 4-9</i>	PCEC	<i>4-9 Sept</i>
AWA Annual Members Meeting	Water Corp	15-Sep-11
AWA WA National Water Week Seminar: Recycling ??	with GWRT Site Visit	19-Oct-11
AWA WA Undergraduate Water Finalist Presentations		25-Nov-11
WA Water Awards 2011 Gala Dinner	Ballroom 1 PCEC	25-Nov-11
<i>AWA YWP My Water Career</i>	<i>Venue - TBA</i>	<i>01-Dec-11</i>

WA Branch Events

*Other Water Events*

*YWP Events*

*WaterAid Events*

### Branch Committee

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