

*The trusted provider of scientific evidence needed to ensure safe water for Australians*

## **Newsletter of Water Quality Research Australia Limited**

**Issue 22 – 26<sup>th</sup> February 2010**

Welcome to the twenty second issue of Water Quality Research Australia News.

WQRA is a company, funded by Members, that coordinates and manages collaborative research on water issues related to public health and aspects of water supply, water recycling and wastewater management. WQRA was incorporated in October 2007.

Issues 1 – 21 of Water Quality Research Australia News can be downloaded from the WQRA website: [www.wqra.com.au](http://www.wqra.com.au) There are currently 584 subscribers to this newsletter.

### **Contents**

-  **Important dates**
-  **CEO's Report**
-  **WQRA welcomes new Members GHD and NMI**
-  **WQRA Node Meetings**
-  **NARP for Settlements and Infrastructure**
-  **Membrane Bioreactor workshop**
-  **Research Programs update**
-  **Education Program news**
-  **Ozwater '10 Update**
-  **Eureka Prizes Open for nominations**
-  **Water Reuse and Desalination conference**
-  **New publications**

### **Important dates for your diary**

24 March	ChemCentre (WA)	WA Node Meeting
25 March	Albany	WA/NT/SA Node Meeting
21 April	TBA	Vic/Tas Node Meeting
22 April	TBA	NSW Node Meeting
27 May	Perth	Board Meeting
28 May	Perth	Members Meeting

### **CEOs report**

Since the last newsletter, this has been a particularly busy month for WQRA. I would like to welcome two new Members – NMI and GHD (see the item below) and WQRA has been having discussions with a couple of other potential Members to help build the WQRA family.

I have had a number of interesting meetings over the month and was particularly pleased to have the opportunity to meet Christine Cussen of the Smart Water Fund (Vic). WQRA also met with delegates from the NED and Kajima Corporation from Tokyo in mid February to discuss potential collaboration on water quality research.

The February Members Meeting, held in Sydney in late February, featured the Summer Scholarship Student presentations which had excellent attendance on both days – and I thank all those who were there to hear about the work of these terrific young people as well as a very interesting presentation from Geoff Codd, University of Dundee.

Hot on the heels of the Members' meeting was OzWater '10, and WQRA once again had a booth in the trade show. WQRA also hosted a workshop on determining the water quality research agenda and the presentations given by the panel members will be on the website shortly.

As many of you are aware, I am currently working on my own contribution to building the capability and capacity for the industry, with a baby girl due in early May. I will be commencing maternity leave just after Easter and in my absence Michele Akeroyd will officially step into the position of Acting CEO. I am sure that with the support of the whole WQRA team, Michele will do an excellent job of taking WQRA forward during this time.

Cheers

Jodieann

### **WQRA Welcomes GHD and National Measurement Institute**

WQRA is delighted to welcome GHD as a new general member and NMI as a new Research Member. GHD is an international engineering, architecture and consultancy company with water as one of its key areas of interest. Our Member representative for GHD is Warren Traves. NMI coordinates Australia's measurement system and establishes and manages our measurement standards and units by developing and maintaining standards of measurement, reference materials and reference methods. Cheryl Lim is the Member Representative for NMI.

### **WQRA Node Meetings**

WQRA conducts twice yearly node meetings that are state based and focussed on local issues. The purpose of the meetings is to give an update on local WQRA projects/activities, to provide an opportunity for WQRA members to share information with the group, ask questions of WQRA, or provide advice on future initiatives. The format is usually a short presentation from WQRA, followed by a 'round table' discussion between participants.

#### **Victoria/Tasmania Node Meeting – Melbourne 21 April 2010**

The decision has been made to combine the Victorian and Tasmanian nodes to share information and enhance collaboration in SE Australia. The current thinking is to convene 2 Melbourne Meetings, 1 Regional Vic meeting and 1 Tasmania meeting over a 2 year cycle. The next meeting is scheduled for Melbourne in April, and the current proposal is to schedule our next meeting later in 2010 in Tasmania (tbc – around Sep/Oct).

#### **NSW Node Meeting – Sydney 22 April 2010**

The next WQRA Node Meeting for NSW will be on Thursday 22<sup>nd</sup> April to be convened in Sydney. The contact for these meetings is David Halliwell, Manager of the Wastewater and Drinking Water Programs. Those wishing to attend should contact David, particularly if there is anything for addition to the agenda.

#### **SA/NT/WA Node Meeting – Albany 25 March 2010**

Given the broad geographic spread of members across WA, SA and NT we held the first joint meeting of SA/NT/WA Members in Alice Springs in August 2009 following the Water Quality Network meeting. The next joint SA/NT/WA Node meeting will be held in Albany on the 25<sup>th</sup> March 2010, once again taking the opportunity to follow the Water Quality Network meeting. Further details regarding the joint SA/NT/WA node meeting will be available shortly.

### **WA Node Meeting – Perth 24 March 2010**

As local Members may not be able to travel to Albany to attend this meeting, WQRA will hold a WA-specific node meeting in Perth on Wednesday 24 March from 9 am to 11 am. ChemCentre – one of our newest Members - has kindly offered to host this meeting at their new facilities.

The contact for the SA/NT/WA Node meetings is Michele Akeroyd, Manager of the Drinking Water Program.

### **NARP for Settlements and Infrastructure**

Minister Penny Wong has released the National Adaptation Research Plan for Settlements and Infrastructure with funds up to \$6.5 million available. The application/selection process will follow a two phase approach. Initial phase with call for Expressions of Interest closes on 9 April 2010. Further details regarding this funding call can be found at:

<http://www.climatechange.gov.au/en/media/whats-new/research-call-settlements-infrastructure.aspx>

WQRA would like to coordinate an expression of interest in response to this Research Plan. Please contact Michele Akeroyd ([Michele.akeroyd@wqra.com.au](mailto:Michele.akeroyd@wqra.com.au)) if you would like to be involved in this collaboration.

### **Membrane Bioreactor 2010 – 2 day workshop April 13-14**

The University of New South Wales Water Research Centre (UNSW WRC) and UNESCO Centre for Membrane Science and Technology in Sydney are hosting a 2-day workshop.

#### **Day 1 will consist of an MBR short course**

An introduction and historical perspective into MBR informs delegates about membrane technology fundamentals, biotreatment fundamentals and MBR technology principles. The afternoon session focuses on the operation, maintenance and commercial systems

#### **Day 2 will provide some insight into current research activities in Australia and Worldwide.**

With a wide range of presenters including Greg Leslie (UNSW), Long Nghiem (Uni Wollongong), David Waite (UNSW), Bruce Jefferson (Cranfield Uni), Pierre Le-Clech (UNSW), Nhat Minh (UNSW) and more to be confirmed.

The day will comprise four sessions which will allow analysis of Australian case studies, group discussions and pilot hall and lab visits.

To register or make enquiries email: [water@unsw.edu.au](mailto:water@unsw.edu.au)

### **Research Programs Update**

#### **Wastewater/Recycled Water**

The recent highlight for the WW and RW Programs was the establishment of WQRA's first project with the WaterReuse Foundation (WRF). In late 2009 WQRA, in collaboration with a number of Australian and International utilities and research agencies, led a bid in response to a Request for Proposal (RFP) from the WRF titled 'Utilization of HACCP Approach for Evaluating Integrity of Treatment Barriers for Reuse'. In February 2010, WQRA was awarded this project and is currently in the process of contracting. This project will build on the growing number of international research projects in WQRA's research portfolio.

#### **Drinking Water Program**

Three project ideas have been sent to WQRA from Members seeking potential collaborators and feedback from Members. These project scopes are:

- ‘The development of fast, on-site measurement of disinfection by-products using lab-on-chip technology’ – Peter McCafferty, ChemCentre - seeking input from WQRA Members in progressing this concept.
- ‘Minimising the formation of THMs in water supplies using chlorine dioxide’ – Peter McCafferty, ChemCentre, future ARC Linkage proposal seeking project collaborators.
- ‘Development of improved certified reference materials for nitrosamines and other trace organics in water using lyophilisation’ Cheryl Lim, NMI – seeking partners in a proposal to submit under the NHMRC Partnership Project Scheme.

If Members would like further information regarding any of these proposals and/or contact details of the project leaders please contact Michele Akeroyd ([Michele.Akeroyd@wqra.com.au](mailto:Michele.Akeroyd@wqra.com.au)).

At the recent Board meeting, three Drinking Water projects were approved:

- Optimizing conventional treatment for the removal of cyanobacteria and their toxins [Gayle Newcombe, AWQC]. This project is a partnership project with the Water Research Foundation and builds on previous research collaborations between the Water Research Foundation and the CRCWQT.
- Evaluation and validation of rapid molecular methods for the detection and identification of microorganisms in water [Paul Monis, AWQC].
- Treatment requirements for Australian source waters to meet health based targets [Dan Deere, Water Futures]. WQRA will coordinate and manage this project on behalf of WSAA. Approval of this project is subject to securing external funding.

## Education Program News

### **PhD Initiative – Second round student applications open 16 March 2010**

PhD Project List and Application forms will be available on the website from 16 March.

WQRA is pleased to announce the award of the Nancy Millis PhD Scholarship to Jeremy Hartley [Curtin University] for the project ‘Mechanisms of N-Nitrosamines Formation in Secondary Wastewaters and their Removal by Advanced Oxidation Process’.

A WQRA PhD Scholarship was also awarded to Russell Yap [UNSW] for the project ‘Optimising Dissolved Air Flotation (DAF) for Algae Removal by Bubble Modification in Drinking and Advanced Wastewater Systems’.

Following the recent success of the Summer Scholarship Orientation Day, all four PhD students and an Honours student attended a Student Orientation Day in Sydney on 23 February 2010.

### **Honours Initiative**

2010 Honours Scholarships were awarded to the following:

Charlotte Andringa-Bate [Curtin University] for the project ‘Redosing of Monochloramine in Distribution Systems to Maintain Disinfectant Residual’.

Katherine Scaffidi [Flinders University] for the project ‘Effects of Cylindrospermopsin on the Differentiation and Development of Mouse Embryonic Stem Cells into Cardiomyocytes and Neural Cells’.

### **Summer Scholarships Initiative**

The Summer Scholarship Students gave presentations of their research project outcomes in Sydney at the WQRA Member meeting on 24 -25 February 2010. Glenn McMellon [CAT/UNSW] was awarded first prize for his project ‘Characterising Groundwater in the Arid Zone for

Management of Hard Water in Remote Indigenous Communities'. Student summary reports will be on website early April.

For the technical tour this year the students were taken on a site visit of the Bondi Sewerage Treatment Plant where their senses of sight and smell were given a major workout. For most of the students (and for Carolyn) it was the first visit to such a facility, and despite the potency of the surroundings, the students managed to ask many questions and agreed it would be an experience never to forget. Many thanks and appreciation to Ross Law, Sydney Water for arranging the site visit.

### PhD Completed

We are pleased to report that Rob May's thesis, *Developing Artificial Neural Networks for Water Quality Modelling and Prediction*, which was completed late last year, has been examined and his PhD has been conferred. A reminder that the abstracts of all our PhD students' theses are on the website – access from the publications page.

### Ozwater update

Ozwater '10 was, once again, an excellent opportunity to network and meet with water industry people from around the country. Highlights for WQRA were the workshop on day 1, where seven respected representatives of industry, research, regulation and funders gave the audience a snapshot of their organisation's drivers. In the next few days the presentations will be available on the WQRA website.

WQRA also congratulates all the winners – and those nominated for AWA awards. It is always great to hear just a little about the nominees – a reminder of the depth of dedication and talent in the industry. This year it was especially pleasing to be able to join in the applause for Allen Gale, (recently of Goulburn Valley Water) who was given the award for Exceptional Service, Water Industry Woman of the Year Mary Drikas from AWQC and Darryl Day who was awarded Life Membership of the AWA.

The winning business card for this year's prize – a very nice wine bottle and set of WQRA coasters – was drawn by Dr Stephen Gray WQRA Member Representative for Victoria University. The winner was Carla Littlejohn of LimnoLogic in Queensland.



### Eureka Prizes open – entries close on 7 May 2010

The Australian Museum Eureka Prizes – rewarding excellence in research & innovation, science leadership, school science and science journalism & communication – have opened for nominations. The \$10,000 NWC sponsored Professor Peter Cullen Eureka Prize is awarded for a scientific research project that has the potential to lead to substantial change in the way Australia manages, uses or protects its water resources, particularly in rural Australia.

The emphasis is on the extent to which the research is genuinely original, rigorous in its application and of practical benefit. The research nominated can cover any aspect of sustainable use or protection of water resources, such as water use and reuse, ecology, hydrology, economics, policy, societal change, engineering and the biophysical sciences.

Guidelines are at: [www.australianmuseum.net.au/eureka](http://www.australianmuseum.net.au/eureka)

### **Water Reuse and Desalination: Water Scarcity Solutions for the 21<sup>st</sup> Century**

The WaterReuse Association, the Australian affiliate – WaterReuse Australia and the Water Services Association of Australia (WSAA) are pleased to announce their first specialty conference. Scheduled for Sydney in mid-November, 2010, this conference will focus on practical aspects of water reuse and desalination as well as relevant research being conducted in the U.S. and Australia. The conference theme is *Water Reuse and Desalination: Water Scarcity Solutions for the 21<sup>st</sup> Century*. The conference will feature a blue ribbon assemblage of world class experts on these two vital components of the water supply equation.

The WaterReuse Association and WSAA invite you to submit an abstract for this specialty conference. Visit the website for full details and instructions:

<http://www.watereuse.org/conferences/australia/10>

### **New publications**

A new WERF publication that may be of interest was released late last year. It is *Pathogen Risk Indicators for Wastewater and Biosolids*, by Alex Keegan, Paul Monis, Paul Jagals, Simon Toze and Judy Blackbeard.

### **Contributing to WQRA News**

Water Quality Research Australia News is sent to people associated with member organisations and others who have an interest in WQRA and its activities. If you would like to be added to the mailing list or submit an item for the next newsletter, send an email to [Angela.Gackle@wgra.com.au](mailto:Angela.Gackle@wgra.com.au)

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